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ABSTRACT

In these hearings, discussion centered on the state of rural development research in the U.S. Department of Agriculture (USDA). Testimony by 19 persons connected with various government and private agencies and groups and with land-grant universities are contained in the hearings, along with letters, articles, and other submitted materials and an outline of the two-day hearings. In particular, emphasis was placed on amount and type of rural development research apart from basic agricultural research. Three general topics were: (1) what is nonfarm, nonfood and fiber rural development research; (2) analysis of research priority system for USDA and the land-grant system, including the colleges of 1870; and (3) applicability and availability of research to rural people--issues of access and usefulness. Research areas mentioned include housing, quality of life, transportation, leadership, energy, community development, health, employment, service delivery, land use, and identification of need through citizen participation. About USDA operations, testimony concerned commitment, coordination of research efforts, funding, rural data base, a rural policy, Extension Service role, and implementation of research. Much testimony focused on implications of lack of specific funding for Title V programs in the 1979 budget. Hearings were chaired by Sen. Patrick J. Leahy of Vermont. (RS)

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RURAL RESEARCH IN USDA

HEARINGS

BEFORE THE

SUBCOMMITTEE ON AGRICULTURAL RESEARCH AND GENERAL LEGISLATION

OF THE

COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY

UNITED STATES SENATE

NINETY-FIFTH CONGRESS

SECOND SESSION

MAY 4 AND 5, 1978

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RURAL RESEARCH IN USDA

THURSDAY, MAY 4, 1978

U.S. SENATE,
SUBCOMMITTEE ON AGRICULTURAL RESEARCH
AND GENERAL LEGISLATION OF THE
COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY,
Washington, D.C.

The subcommittee met at 8 a.m., in room 322, Russell Senate Office Building, Hon. Patrick J. Leahy (chairman of the subcommittee) presiding.

Present: Senators Leahy and Young.

STATEMENT OF HON. PATRICK J. LEAHY, A U.S. SENATOR FROM VERMONT

Senator LEAHY. Good morning.

The Subcommittee on Agricultural Research and General Legislation of the Committee on Agriculture, Nutrition, and Forestry will come to order.

Our first witness will be Secretary Rupert Cutler, Assistant Secretary for Conservation, Research, and Education, U.S. Department of Agriculture.

Mr. Secretary, I am glad to have you here today and I welcome everybody here this morning. I want to thank all of you for rising early to participate in these hearings. We try to have them early for the convenience of the witnesses, so that most of you who have full agendas will be able to get in here and out at not too late an hour.

We are going to talk about a very important and rapidly emerging aspect of agricultural research. We are going to have during these 2 days attention centered upon USDA's research activities in the area of rural development.

The Rural Development Act of 1972 defines "rural development" as:

> The planning, financing, and development of facilities and services in rural areas that contribute to making these areas desirable places in which to live and make private and business investments; the planning, development, and expansion of business and industry in rural areas to provide increased employment and income. the planning, development, conservation, and use of land, water, and other natural resources of rural areas to maintain or enhance the quality of the environment for people and business in rural areas, and processes and procedures that have said objectives as their major purpose.

This is a long and rather complex definition. Rural development research represents an equally arduous and complex process.

Surprisingly, rural activists found that once they embarked upon a course of program activity in rural areas, they actually knew very little about the conditions of life for most rural Americans. This finding complicated the new role for rural development research because it created pressure upon an emerging USDA research priority area to respond with answers to questions that we are just now beginning to properly phrase.

Research activity in the Department was, and is, further complicated by the very complexity of the research vehicle itself. It is an apparatus with staff ties which extend from Washington into every State—through the land-grant system, the colleges of 1890, and the agricultural experiment stations—as well as an information delivery system which is represented in virtually every American county through the Cooperative Extension Service.

Finally, the implementation of rural development research continues to be a difficult task, because it is housed in a research system which has had a very different, and at times, contradictory orientation. Most simply, this has been a research system heavily committed to providing technical assistance and public visability to basic problems of agricultural production.

We realize, of course, that our emphasis in these hearings upon nonfarm, nonfood, and fiber research represents only a part of the rural development picture. By limiting our scope to this focus, we are in no way stating that agricultural research, small or large in orientation, is not directly related to rural development. We recognize that the traditional food and fiber research generated by USDA and the land-grant system has had both positive and negative effects on trends and development in rural America. We also recognize the need for agricultural research to move beyond a single solution focus to more integrated, wholistic analysis of the relationship of that research to rural development. However, it is clear that a discussion of rural development research based upon these needs and oriented away from traditional agricultural production research, has not been a major focus in recent years.

Much of the discussion generated by agricultural research has left untouched many rural policy questions equal in their national importance to the production of food. Some of the policy questions concern the conditions of life quality in rural America, national population distribution, land ownership, and resource management.

A 1975 National Academy of Sciences report observes:

> There appears to be a growing public attitude that resource support could be diverted from agriculture and applied to the numerous other growing societal problems. The rationale for such shifts appeals to a public concerned about health, crime, environmental degradation, transportation, and other escalatory costs.

We are here today to discuss the mechanisms for focusing a greater portion of the agricultural research system on these other pressing rural issues. Our discussion should provide critical information on the neglected areas of rural development research, and simultaneously, increase the visibility of those rural people, communities, and institutions who have, quite frankly, been "left behind." Most importantly, we want to know what Congress and rural

Americans can expect in terms of rural development research commitment by USDA and the land-grant system.

I think that I can speak not only as a Senator from perhaps the most rural State in the United States, but also I can speak very well for the other 99 Senators. These men and women represent States which have significant rural areas; even in the largely urban States like New York and California.

I think our concern is all the same. What type of research is being done for rural America? Not only what is being done, but what should be done and what will be done.

Mr. Secretary, I am always happy to see you at our hearings. Your entire statement will be made a part of the record, so please proceed with your presentation as you see appropriate.*

STATEMENT OF DR. M. RUPERT CUTLER, ASSISTANT SECRETARY FOR CONSERVATION, RESEARCH, AND EDUCATION, U.S. DEPARTMENT OF AGRICULTURE

Dr. CUTLER. Thank you very much, Mr. Chairman. It is always a pleasure to testify before your subcommittee, and particularly this morning on the subject of the review of rural development research and extension, because when I was a professor and extension specialist at Michigan State University, I was pleased to have the opportunity to obtain support for my graduate students through the title V, rural development extension research program, and I came to realize how important that program was to permitting faculty members not ordinarily involved in rural development research to test out their pet theories and do some experimental exploratory work with this modest support; that, while modest, gave them opportunities to use graduate student assistants to work in brandnew areas, to obtain new information on ways in which we can improve the quality of life in rural America.

So I appear before you as one who has had some experience with these programs and as a personal advocate of an increased level of activity in this field.

As you noted in your letter to Secretary Bergland, such a review is appropriate now that the Food and Agriculture Act of 1977 has been passed.

We agree that the review should be a comprehensive one. It should look at the entire system. We should look at how the problems flow from the users to extension and research. And we should also look at how research findings flow back to extension and users.

In providing this testimony, I shall present an overview of the Department activities with emphasis on the research and extension in the land-grant universities. Dr. Kenneth Farrell, of the Economics, Statistics, and Cooperatives Service, will describe the efforts of his agency.

Let me now proceed with responding to the committee's questions, more or less in the order they were asked. Supporting documents and appendices amplify the information requested in attachment 1 of your letter to Secretary Bergland. I request they be included in the record, along with the full text of my statement.

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*See p. 259 for the prepared statement and supporting material submitted by Dr. Cutler.

Senator LEAHY. Both will be inserted in the record.

Dr. CUTLER. Mr. Chairman, let me emphasize right at the outset that rural development is a primary USDA commitment—and that nonfarm rural research and extension are primary parts of that commitment.

USDA is committed to providing rural Americans with more employment and investment opportunities, with a higher and more equitably distributed income.

It is committed to conserving resources and abating pollution in rural communities—to generally improving the quality of life in rural America.

From 1970 to 1976 rural development research and extension increased markedly. The number of rural development-related research projects increased from 350 to 1,347. The number of scientist-years devoted to these projects increased from 73 to 364.1. Federal and State funding rose from $3.9 million to $18.3 million.

For extension, nonfarm rural development efforts increased from $23 million in fiscal year 1970 to $54 million in fiscal year 1977. Of this amount approximately $20 million were Federal funds and the balance was provided by State and county funds.

These increases took place through a redirection of funds from other priority areas. For example, beginning in 1971 the rural development centers started in this manner. Each center received initial funding of $75,000 annually from Public Law 89–106 grants.

Such funding redirection typified the growing commitment to rural development research and extension in the late 1960's and early 1970's.

But this commitment grew not only in quantity—in the number of dollars spent and in the number of projects. It also grew in quality. Projects became more sharply focused on key and critical problems—problems like job creation, income, resource utilization, improvement of service delivery, population growth, environment, and rural housing, to mention just a few.

A stronger base was developed in rural extension, the delivery apparatus of research, and therefore highly important.

The regional rural development centers played a vital role. They provided a mechanism for supplementing and complementing research efforts of the individual States.

Both Public Law 89–106 and title V funds supported activities designed to achieve the basic objectives of the centers. Emerging issues and priorities in rural development were identified. Regional research and extension were strengthened. Inventories and summaries of existing knowledge were completed. Research gaps were identified. The quality and productivity of rural development and extension were increased.

The committee has asked us to define the criteria we use in differentiating rural nonfarm development research from other research. In response I want to state that our user criteria dictates that nonfarm rural research should affect all people in rural areas.

Some specific target groups affected are small and part-time farmers, members of local government and planning groups in rural areas, hired and migratory agricultural workers, commercial farmers, rural nonfarm people, young people, low-income and poverty income level people, and elderly and retired people, just to mention a few.

Appendix I of my statement lists other criteria—for example, kinds of decisions influenced, processes influenced, and recipients of benefits.

Current activities are represented by some 1,300 rural development-related projects. Of these we can identify a solid core of 400 projects. These 400 projects concentrate on critical needs in employment, health, environment, recreation, and the financing and delivery of rural community services.

These efforts include the work extension does to expand the business and industrial base of the community, provide community facilities and services, develop community-supported manpower programs, improve citizen participation in local governing processes, and develop community organizations that can address local citizen needs—such as housing authorities or planning commissions.

The primary objectives of extension's nonfarm CRD program are: (1) to help stimulate local initiatives and enhance local determination of community priorities and improvements, and (2) to improve communications and cooperation between governmental agencies, local organizations, local officials, and concerned citizens.

Currently, extension is providing assistance to over 50,000 community development projects that involve approximately 2½ million citizens. The major focus of the projects and the supporting education program is centered on jobs, economic development, housing, and community services and facilities. Some 125,000 citizens and officials are also being provided with taxation and local government operations assistance.

A closely related activity is the Resource Conservation and Development—R.C. & D.—program. This program is carried out under the leadership of the Soil Conservation Service. The program provides coordination and technical and financial assistance in implementing R.C. & D. area plans in 178 authorized areas covering one-third of the contiguous land area of the United States. These 178 areas cover nearly 1,200 counties, with 3,145 sponsoring local units of government. Applications for an additional 63 areas are awaiting authorization. R.C. & D. area plans are carried out through installation or completion of "measures," which are individual projects for achieving the sponsors' goals and objectives. Local sponsors complete annually an average of 1,800 measures—250 of which are installed with USDA technical assistance and guidance.

Mr. Chairman, I think you know from previous hearings this year that our R.C. & D. program is undergoing detailed review to see if we can't sharply focus its objectives. It was authorized in the Rural Development Act of 1962, I believe, in the context of a program that would be focused on alleviating problems of areas with high unemployment and underemployment and having an economic development impact, and as a matter of fact, over the last several years it is on its way to becoming a wall-to-wall program and we don't have the resources to provide that kind of special assistance in every county, so to speak, through the Soil Conservation Service. So my

Deputy, Dave Unger, the former executive vice president of the National Association of Conservation Districts, and Alex Mercure's Deputy, Henrietta McArthur, are working on the conservation district program to see if we can't pull it more tightly together, and more sharply focus on alleviating employment problems and be more specific about its goals.

All across rural America rural Americans in all walks of life are being served.

Take the Eastern Shore of Virginia. This is a lagging region. It has had low income, substantial unemployment, and heavy emigration.

To help solve the region's problems the Division of Planning and Development of the State of Virginia, and the Virginia Planning District asked the Department of Agricultural Economics at Virginia Polytechnic Institute and State University to initiate two studies. One study defined development opportunities in agriculture. The other analyzed business and governmental activities, and examined income and employment impacts of changes in various sectors of the economy. The results of the studies were discussed with local citizens, and planning and development groups. The work of the researchers and extension personnel was praised as uniquely helpful, in contrast to occasions when the region was surveyed before.

It sounds like my experience in the Upper Peninsula of Michigan, where there has been study after study by the Upper Great Lakes Regional Planning Commission and everyone else. Here is an example where the study was actually translated into action.

Why were these studies so useful, in contrast to others in the past?

Because researchers and extension personnel involved local citizens, as well as local and State officials, in the formulation of the problems to be studied. Local people were included right from the start.

It was also successful because research and extension dealt with a major problem, one recognized as such by all the parties involved, and because research and extension not only diagnosed the ills, but also explored the alternative remedies—and then recommended specific treatment. That doesn't always happen.

Senator LEAHY. How well I know.

Dr. CUTLER. They reported the findings to local people and local and State officials promptly.

Finally, they followed up with further analysis that the studies indicated was needed, and analysis is continuing today.

I believe that a lot can be learned from this project about why some studies succeed and others don't.

Other research has made significant contributions to the formulation of national policy. A regional project in the Northeast on agricultural labor assessed alternatives for extending unemployment insurance coverage to farmworkers. The Department of Labor contributed staff to help formulate the research problem. It also contributed additional funds to support the research. When the research was completed, a policy conference at Ohio State University explored the results and implications. The results became the basis for an administrative proposal and other legislative proposals. William

H. Kohlberg, Assistant Secretary of Labor for Manpower, commented:

> It is a rare occurrence when the results of research conducted by the academic world bear such a close and timely relationship to legislative proposals of the administration.

I will summarize a few other examples of successful projects that serve rural Americans.

In Maryville, Mo., extension helped establish a community group that now has seven projects either completed or underway, including a day care center, community attitude survey, endorsement of a bond issue, airport expansion, and the development of a lake for flood control, water supply, and recreation.

Other examples are in our prepared testimony.

How can rural development research and extension continue to help meet the needs of rural America?

We should proceed by building upon the Federal-State partnership. This is basic.

But how should the Federal role develop? The National Rural Center, a private nonprofit organization in Washington, D.C., has recommended one approach. In a policy paper dated December 7, 1977, the center proposes that our rural development strategy consist of three parts—goals, action programs, and the "essential process."

By the essential process, the center means the process by which specific goals are defined and action programs are brought to bear on the needs and problems of citizens and their local communities. The need to tailor the national effort to local problems must be underscored.

New research and extension can make this essential process productive. Research and extension can help communities think through their own problems—they know them best—and establish their own goals.

The major objective of nonfarm rural development research and extension is to reach more local communities. This is necessary if we are to increase job opportunities, improve availability of quality rural services, improve the immediate environment, upgrade the quality of housing, and build the capacity of local communities to effectively meet their needs.

A major goal of extension is to give added attention to increasing job and income opportunities in rural America and to strengthening local units of government and their planning capabilities. A special thrust is also being made to train rural leaders and to get more citizen participation in the development process. Through these efforts, local communities should be better able to resolve their development problems with their own leadership and their own resources. When outside resources are necessary, they should be able to make better use of the Federal grant and loan programs.

To do this, we need to further improve the quality and productivity of current efforts. In research this requires more orientation of projects toward development and policy analysis.

These are the specifics of making rural development research and extension more effective. I suppose you can sum it up by saying that while theory has to be enriched, we also have to pay more attention to the "nuts and bolts." I believe both can be done. I believe we can do a better job on both fronts.

Mr. Chairman, we can look forward with confidence to a continuation of the effective job that rural development research and extension has been doing.

This review you have begun will be important. We are ready to reexamine anything that this committee believes should be reexamined.

The 1979 budget requests $307 million in research and extension formula funds which can be utilized for rural development activities. However, no funds have been requested for the title V programs. This does not signify a reduced interest in rural development, but rather this decision reflects the balance which had to be struck between continuing priority activities, initiating new activities, and minimizing budget deficits.

I might add, Mr. Chairman, that as we look at the dollars and the scientist-years that can be added up as related to rural development research and extension, we are somewhat handicapped by a narrow definition that is applied in this exercise. Much of what we do in other areas—in home economics, particularly in nutrition; in natural resources programs having to do with the soil and water conservation, and in pollution abatement programs having to do with these improvements of the quality of life in rural America—don't fall under that strict definition of rural development. Nevertheless, they still have a major impact on rural quality of life.

Senator LEAHY. I would hope that we do not spend too much time trying to define exactly what rural development is, because we will only be distracting ourselves from the important research needing immediate attention. Conceivably, events in urban areas which cause a migration to the rural areas may be considered rural development. It would not fit into most definitions of rural development, but the relationship may be there. Or, conversely, the changing of job markets which takes many productive people out of rural areas could be viewed as a rural development issue. I am probably addressing some of the areas I want to go into later.

If you are in the process of concluding, please continue.

Dr. CUTLER. I certainly agree, and I agree with the definition.

Mr. Chairman, the problems that remain to be solved are many, despite past and present progress. But these problems can be solved.

Research and extension are essential components of any rural development strategy looking toward their solution. Therefore, any national commitment to solving rural development problems should consider strengthening rural research and extension activities.

The review you have suggested, Mr. Chairman, is a step in that direction. That is why I appreciate the opportunity to take part in it here today.

Thank you.

Senator LEAHY. Thank you, Mr. Secretary. I have a number of questions to ask.

If you want to invite any of the people from your office to join you here at the table, I would be most happy to have them up here.

Dr. **Cutler**. Would you prefer to hear Ken Farrell's testimony first?

Senator **Leahy**. I don't want you to feel like the Lone Ranger.

Dr. **Cutler**. I am backed up.

We have Ken Farrell, Acting Administrator, Economics, Statistics, and Cooperatives Service; John Bottom, Acting Assistant Deputy Director for Rural Development Extension—Science and Education Administration; Ken Deavers, Director of the Economic Development Division of ESCS; Jim Thornton from Farmers Home Administration; Edward Moe, Coordinator for Rural Development, Science and Education Administration, Cooperative Research; Bill Hunt from Farmers Home Administration; and Vince Rock, from Farmers Home Administration.

Senator **Leahy**. Is there anybody left running the shop?

Dr. **Cutler**. Well, it reminds me of the experience I had a couple of months ago, Mr. Chairman, when we were testifying on appropriations for Conservation, Research and Extension. The hearing room was full of what appeared to be witnesses and observers, and the chairman asked how many USDA employees were in the room, and everyone in the room stood up. We wondered what they were doing there and who was running the shop.

I think this is a rather modest list of technical experts.

Senator **Leahy**. I agree. Perhaps Dr. Farrell and others would join you up here at the table.

Dr. **Cutler**. Dr. Farrell is here and he has a prepared statement.

Senator **Leahy**. Your full statement will be placed in the record.* If you could summarize it for me, then I would like to address a number of questions to Secretary Cutler. Mr. Secretary, if you could then parcel the questions out in whichever way you see fit.

STATEMENT OF DR. KENNETH R. FARRELL, ACTING ADMINISTRATOR, ECONOMICS, STATISTICS, AND COOPERATIVES SERVICE, U.S. DEPARTMENT OF AGRICULTURE

Dr. **Farrell**. Very good, sir.

I would like to say at the outset, I am pleased to have the opportunity to discuss the rural development research conducted within USDA by the Economics, Statistics, and Cooperatives Service, the agency for which I am responsible within the USDA.

I might, Mr. Chairman, just briefly mention the functions of the Economics, Statistics, and Cooperatives Service. It is a new agency created by reorganization in late December of 1977, through a combination of the former Economic Research Service, the Statistical Reporting Service, and the Farmer Cooperative Service.

Our economic divisions conduct economic analysis and research in a staff sense within the Department of Agriculture, but in a basic research sense as well.

The statistics function is a large one, and again, serves as the core of the Department's data gathering activities.

The cooperative's activity is a relatively small part of the agency, focused specifically upon serving the needs of farmer-owned cooperatives, both in agricultural marketing as well as in rural development.

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*See p. 292 for the prepared statement of Dr. Farrell.

As indicated in my statement, our resources for rural development research are relatively modest. The major focal point within the agency for rural development research is in a unit called the Economic Development Division, which is headed by Ken Deavers, who is sitting on my right. Our budget in that particular division currently totals about $2.8 million, practically all of it in the form of appropriated funds with some reimbursement moneys from EPA.

We do have a considerable amount of work which is resource related, an integral part, of course, of rural development within the definitional context that you were using earlier.

It is a little difficult to be precise on the budget and manpower because many of those projects are really multipurpose. They relate to rural development but they also have other purposes as well. But our estimate is that perhaps as much as $1.3 million currently in the resource economics area might be rural development oriented, giving us a total in the agency of somewhere in the vicinity of $4 million which is focused on rural development in one way or another.

In my prepared statement we address three principal questions in your letter to Secretary Bergland. There was one dealing with the definition of rural development, which I do not propose to go into here.

I would like, Mr. Chairman, to just mention briefly some of the new initiatives, research incentives, that we think would be appropriate and are needed in the rural development area.

The need for new rural development research knowledge is underscored by the fact that rural areas are growing twice as fast as metropolitan areas, and yet our understanding of the causes and likely future course of that rural growth is quite limited.

Senator LEAHY. Is that growth evenly spread across the country, or is it more pronounced in areas like the Sun Belt?

Dr. FARRELL. It is occurring fairly broadly, but there are areas of concentration, and I think generally those areas of most rapid growth would be associated with the Sun Belt, and perhaps in those areas that surround major or outlying from major metropolitan areas of the country, but it is a fairly general phenomenon.

Senator LEAHY. You say it is about two to one?

Dr. FARRELL. Yes.

We believe that among the specific issues that need to be addressed in a research context, in order to develop adequate policies and programs related to rural development, there is the need for projections of trends in rural areas; of population, income, and employment.

I know we have some information on a broad national scale, but it does need to be more specific and more targeted to particular parts of the country, to particular areas.

I believe that the provision of such information is basic to developing any kind of rational planning strategies for provision of rural health care facilities, for housing, for water and sewer and to those which are concerned with job creation and training.

At present, we really have no sound analytical basis on which to make reliable estimates of such variables for nonmetropolitan

America on any generalized basis. I believe that is a major gap in our rural development research capability, one that we have been trying to cope with internally, but even so we still have much to do in that particular area.

Another example of the knowledge we need from rural development research is in the area of information on nonfarm income and family labor force participation of small farm operators. Small farm families are an important source of labor supply for the economic activities of rural America.

In addition, expanding nonfarm income activities have been an important factor in increasing the likelihood that they will remain involved in farming.

Mr. Chairman, coincidentally, we convened yesterday morning a group of persons from both within the Government and from the land-grant universities and other institutions to try to focus upon the small farm question, to identify where our knowledge gaps are and to hopefully develop a specific research agenda that we might be able to pursue.

Within my Agency there is a great deal of interest in the small farm questions since it is an integral part of the overall rural development issue.

Another potentially important area of rural development research in the context of our Agency is the study of rural nutrition, including USDA programs, and the relationships to health and employment in rural America.

Over the past two decades substantial resources have been invested in feeding programs to relieve malnourishment among nutritionally vulnerable groups. However, more attention has been given to counting individuals served by programs than to measuring the extent to which the programs change nutritional practices, health status, work experience, and well-being. There would be value in exploratory studies of a multidisciplinary nature which focus on the nutrition experience in highly nutritionally vulnerable groups in the rural population. The contributions of these groups to rural labor force productivity are important to the achievement of high levels of efficiency in our national economy, and to their achieving higher standards of living.

A different kind of knowledge gap is the inadequacy of the information we have on the quality and availability of essential community services in rural areas. Although Federal assistance to rural areas for community facilities amounts to billions of dollars annually, Federal resources are nonetheless limited and not adequate to meet all demands for assistance. Considerations of equity as well as effectiveness require that we target Federal assistance to communities most in need, and to do this, we must improve our knowledge of the conditions of services in rural communities. Again, it is also necessary to coordinate Federal, State, and local resources to get the most productive use of these resources.

It is also important to note that agencies such as FmHA, which believes it has the best rural program delivery system, could use research which is targeted to program needs. We must provide research which helps all levels of Government make more appropriate and consistent decisions on how to invest and manage rural development resources.

I would be remiss in saying this if I did not mention the fact that we have discussions underway at the staff level with representatives of the Farmers Home Administration, to assure that their interests are represented as priorities for rural development research are considered within my Agency.

Mr. Chairman, I do have a section in my statement which relates to the applicability of research to rural people, but I believe in the interests of time I would ask that that be incorporated in the record, and would propose that you might wish to ask some questions concerning this.

Senator LEAHY. Thank you.

I am concerned that rural development research is not as high a priority as it should be at USDA. That is something which many people have expressed concern with over the years.

I ask you, as much as possible to put aside any type of internal departmental bias when answering if there is any question that rural development research should be in any department other than USDA? Dr. Cutler.

Dr. CUTLER. Not in ours.

Senator LEAHY. Not in yours, both on and off the record.

Well then, we have talked about title V, for example, yet we don't find money in the 1979 budget for it. Dr. Farrell has said that there is no adequate rural data base, and that you are in the process of trying to shift funds within the USDA to rectify that. Other questions that we have asked show us that the relative priority of rural development research at USDA and the land grants is rather low. Reports from your CRIS system indicate that a total of 364 scientific man years were spent in fiscal year 1976 on rural development research. This represents only about 3.3 percent of all research scientific man years for 1976.

In a December 1977 USDA report—1976–81 Cycle for Projecting and Analyzing Research Program Adjustments—it was noted that allocations under the assumption of a 20-percent scientific year increase provide a clearer indication of administration research priorities and the projections for this cycle show a decrease in rural development research. Figures for 1970–76 in this same report show the total 6-year increase for all research to be only 3.8 percent, making the zero change projections more reliable and the zero change projections for 1976–81 actually indicate a slight decrease in rural development research.

I am just wondering if we are really going in the right direction. Is there a deemphasis of rural development research? Can you tell us what the future priority is going to be?

Dr. CUTLER. With respect to the 1979 budget title V within that budget has disappeared. This is simply a result of a ceiling on budget for extension and research that came out of the total limitation on the Department of Agriculture. The ceiling impacted on our research and extension programs perhaps more severely than on some others within the Department because of the discretionary nature of our programs compared with the nondiscretionary nature of some others within the Department.

The impact is rather severe, and when we came to establishing priorities for the decision units that are called for in the zero base budgeting process, it appeared to me more important to sustain the formula funding for extension and research through the Smith-Lever-Hatch programs at some level approximating their current level than to continue some of these smaller earmarked programs. I think we will all admit, these smaller programs have been at a minimum or lower level for the last few years anyway. Eliminating them seemed to be a better course than reducing even farther the base or formula programs that are the foundation upon which academic department chairmen base their salary plans for their tenured faculty.

So given that trade off, our decision was to sustain the formula funding as much as possible and recommend that some of these earmarked programs be discontinued. However, the State experiment stations and extension services are free within the context of the plans of work that are reviewed by USDA to spend that formula money on what they consider to be their highest priority programs. If community development and rural development programs are of highest priority or one of the highest priorities in a given State, the administrators of the experiment station and the extension service are free to use that formula money, and they do, for rural development work.

In other words, the title V program, like so many of these other small earmarked programs in research and extension are basically the tip of the iceberg. They are perhaps overused as an indicator of our support for the programs, when in fact they are experimental programs on the fringe of the hard money used by the department's faculty.

Obviously, the title V money is used primarily to support graduate students and pay for contracts that get into some important experimental areas, but they aren't the hard core funding base for the faculty. That is what we had to protect in the year of declining budgets for these programs.

Senator LEAHY. You talk about, for example, money going into various research programs, including the Hatch Act funds. But in the 1979 budget there is a redirection of research from Hatch funds to competitive grants. In looking at the whole area of rural development, my colleageus and I on the Appropriations Committee try to determine the rural impact of programs. Many times we cannot find any kind of rural development data to assist in preparing the questions that we want to ask.

Now, I am told that new rural development research initiatives are just emerging, developing. If that is so, and if we subject them to the competitive funding process, isn't that going to affect their priority status in a rather deleterious manner.

Dr. CUTLER. There was no intent on the part of the Department in structuring its fiscal year 1979 budget to exchange Hatch money for Federal grant money. That is the way it seems to have come out. However there was not a conscious decision that the experiment stations were failing to perform and that therefore we needed to transfer resources to other institutions outside of the land-grant system. That is exactly not the case.

Senator LEAHY. Even if it was not a conscious plan, but that is what happens though, then isn't that the same result?

Dr. CUTLER. The fact is that the agricultural experiment stations will be in a better position than anyone else to successfully compete for the competitive grants.

Senator LEAHY. How many competitive grants are presently used for rural development?

Dr. CUTLER. That is another question, and that was the one I was just going to address myself.

Senator LEAHY. We are all ahead of you here.

Dr. CUTLER. Great minds are thinking along the same lines here.

You are right, the current targeted subject areas for our competitive grants program are in basic plant science, to improve photosynthesis, to get nitrogen fixation transferred to new crops, and also in the field of human nutrition. It has been suggested that the competitive grants program in future years should be broadened to include other areas, animal health and forestry, and obviously rural development is another possibility in this regard.

I can assure you, Mr. Chairman, that as we go forward with our fiscal year 1980 considerations that rural development will be given high priority by us.

I am not quite sure—I can't guess at this point how the title V program will come out in this context, but I am personally concerned about our need to have a visible and important effort in rural community development research and extension, and I think we have learned something from our experience in fiscal year 1979.

Perhaps we did make a mistake in deciding to put all of our eggs in the Hatch basket, so to speak, and in the Smith-Lever basket. We seem to have sent out some signals that were really in error by zeroing out some of those earmarked programs. They seem to have been read by folks as indicative of our disinterest in those programs. This is not true. We hope that they continue the work under the base funding. If the implications read into such action are that we are not interested in these areas, I think our strategy might well change in fiscal year 1980.

Senator LEAHY. You will at least make sure someone takes a look at this?

Dr. CUTLER. We will.

Senator LEAHY. Given the makeup of the newly formed Joint Council on Food and Agricultural Sciences, do you envision any greater commitment to rural development research than with the old ARPAC?

Dr. CUTLER. It will be stimulated by the Users Advisory Board.

Senator LEAHY. That is the Agricultural Research and Extension Users Advisory Board?

Dr. CUTLER. Yes.

Senator LEAHY. This Board, I understand, has only one representative on rural development. Has it been appointed yet?

Dr. CUTLER. They are in the process of being appointed. We have the clearance process underway for all but perhaps three of our Users Advisory Board members right now. Its composition will be announced very shortly. The Joint Council, of course, has been created and held its first meeting on Thursday and Friday of last week. The Joint Council was very carefully put together to represent as broad a spectrum of interests as possible. There are renewable resources people on it from Resources for the Future, for example, people specifically from nutrition, teaching, research and extension representatives, people responsible for our land-grant system, as well as USDA personnel. The Council must consider rural development and nonfarm rural development, and I am optimistic that they will address those issues.

We don't have much of a track record to look at yet, but your encouragement in hearings of this kind, gives us motivation to look in this direction.

Senator LEAHY. I don't mean to raise these questions in a critical fashion, I do it as encouragement. I find an awful lot of concern among fellow Senators, concern that cuts across ideological and party lines, over the lack of rural development research. I think that it is easy to focus our attention on urban America, where there are major problems like transportation and crime. The press finds it easy to pop in and spend a couple of days there, photograph it all, and come back out. If there is a riot in an urban area, a welfare scandal, or an environmental problem, it is easily focused on because you have 2 or 3 million people in one location being affected.

When you put these same 2 or 3 million people across rural America, it takes a little bit more time for the press or Members of Congress or anybody else to go and look at their problems. But the same problems are there.

There has been strong national level ERS research on housing quality, migration and the elderly. But in my State one constituent may represent all of these points. For policy planning in rural States, we need information cross-tabulated in a manner so as to be useful in describing community level conditions. It is vital for local decisionmakers to have this information. Then they can compete with the urban organizations who have a good bank to use when applying for the various Federal programs. I think that rural communities should be placed on an equal footing with urban areas, especially, Dr. Farrell, when there seems to be a 2-to-1 population increase in rural areas.

Alex Mercure testified last month before the House Subcommittee on Family Farms, Rural Development, and Special Studies, and I quote:

> The rural data base is grossly inadequate for assessing conditions in rural areas, for relating to the perceived needs of rural people, for determining future funding requirements, and for monitoring the effectiveness of the delivery of Federal programs.

Currently, we have no research on rural-urban cost differentials, no research on the availability of rural credit, no systematic identification of rural poor, no systematic identification of land ownership. Aren't these areas that we should be going into? Or am I looking at this from too narrow and too parochial a view?

Dr. CUTLER. I am sure we should. Let me ask Ken Farrell to respond.

Dr. **FARRELL.** I would fully agree with respect to the inadequacy of the data base. I think that is one of the critical deficiencies that we have for more effective economic research and for more effective targeting and delivery of various types of programs from the Department.

For example, to cite just one of the difficulties that we have, we basically rely upon the census of agriculture for establishment related data, if you will, from rural areas and the census of population for, if you will, people-related data; yet we find that neither of these by themselves is adequate, and there is no adequate way to cross link these data such that we can really zero in on target populations in particular rural areas.

There are major deficiencies and major problems and major gaps of the kinds that you are alluding to.

In my Agency, as I mentioned before, we have a budget for research, economic research, of about $2.8 million. Of that only about $200,000 are available on a regular basis for the development of a data base. This is focused largely upon the farm labor force, and some other general types of statistics, but we simply do not have enough adequate information to address the kinds of issues that are important, as I pointed out in my statement and that Dr. Cutler has alluded to.

With respect to the particular areas that you pointed to, I would agree that these are, as I see it as an economist, particularly important areas, and that we need to enhance our capacity to deal with them.

I might add, one of the areas you mentioned was credit. We have done some work within the Agency on credit, and in our fiscal year 1979 budget we are asking for increased funds to look at the nature of rural credit markets and in addition to be able to undertake some work related to rural labor supply, its characteristics and the nature of demand for labor in rural areas. But, again, it is small relative to the need.

There is one other aspect that I feel strongly about. I think that the development of an adequate data base is important on a national level, but I also believe firmly that economic development initiatives and economic development research, if it is to be helpful, has got to be targeted to specific local conditions, and has got to be meshed in with the institutions in the areas to be effective.

Senator **LEAHY.** I agree absolutely because I think all of us who spend time traveling around the country know how different people are in one part of the country to the other. One of the big mistakes that is made down here in Washington is that we feel somehow we can set up an average program for an average State, and of course, there is no such thing as an average State. If there is, it certainly isn't my State, with close to a half million people, nor is it California with 22 million people.

You know, we all can say that we are in favor of this research. I think we all recognize the need for it. I am just curious about the amount of money that is in the budget for it. Do these amounts reflect the amounts that the various arms of USDA have asked for originally, or do they represent a scaling down from your original request? To what extent are your own individual priorities being reflected in this budget?

Dr. CUTLER. I am afraid we come back in a year of tight budget to traditional programs and the exploratory or experimental programs tend to be sacrificed. We tried to avoid that. In the process we have created a lot of problems for ourselves, as you know, by trying to redirect or reallocate resources, within a decreasing budget, where we propose to reduce support in some areas to increase it in others. The areas that are proposed for reduction are subject to great concern, and we are asked why we are reducing in those important areas.

It is difficult for agencies to answer exactly what they have asked of the administration, although I am sure that they can come up with some numbers.

Within our zero base budgeting process we asked for three levels—a reduced level, current level, and an increased level. This is basically derived from one list of decision units and pieces of different kinds of programs that are placed in a priority ranking. The cutoff line is simply drawn across that list of areas at different funding levels through the Agency.

Senator LEAHY. Can your rural development research programs compete adequately within USDA against the more traditional agriculture research programs? Let me state that this committee, obviously, has jurisdiction over both. And certainly as chairman of the subcommittee I have been a strong advocate of improving and increasing our traditional agricultural research. I think it is an area where this country has significant advantages over the rest of the world. As you look at the economic trends of this country, the balance of payments and other things, agricultural research is going to have a growing importance to our political and economic stability and even to our strategic or military stability.

But having said that, for the sake of this country itself, for our own standard of living, or perhaps quality of living, I think rural development research is also extraordinarily important. Do you have competition there between agricultural and rural development? Is rural development research losing that competition?

Dr. CUTLER. In a general context, in responding to your observation about the need for food and agricultural research, as broadly defined in the farm bill of 1977, it is true that we are underfunded; 2 percent of the Federal R. & D. budget goes to agriculture, as I recall, so that the pie is small. It is too small.

Senator LEAHY. Yes.

Dr. CUTLER. So the slice for rural development is obviously going to be too small, but I think we can be more creative when we go through our second year of experience with ZBB and redesign our decision units. We can be more creative by assuring ourselves that rural development research and extension are included in the highest priority decision units somehow and/or by slicing the decision units a little more thinly so there are more of them. This then will include some money for rural development above the cutoff line, no matter where that line falls.

Perhaps I made a mistake last year by lumping the total for Hatch, for example, as the first decision unit and the total for Smith-Lever as a decision unit for extension without providing, say, half of the current level for that and putting rural development, title V and some other earmarked programs in and adding another increment to Hatch or Smith-Lever. It is a difficult process.

Senator LEAHY. One of the major divisions that gets involved in rural development is Farmers Home Administration. It has no research arm itself. If it did, wouldn't that make coordination between research and program delivery easier?

Dr. CUTLER. I don't think so. We have relationships of that kind with all of the action agencies in the Department. As a matter of fact, we are beginning a series of meeting between our Science and Education Administration, Economics, Statistics and Cooperative Service—ESCS—and the administrators of our action agencies, such as Farmers Home Administration, soon to ask the action agencies more specifically what their problems are that we should be addressing in our research and extension agency.

This relationship exists across the spectrum of USDA action programs. Our Science and Education Administration is in business to provide the research and extension backup they need. I feel very strongly that rural development research should be concentrated in the Science and Education Administration and in ESCS. I also feel equally strongly that a better communications line, a better two-way feedback loop, if you will, between the action agencies, such as Farmers Home Administration, SEA, and ESCS, needs to be created so that our research and extension people are more responsive to the needs of those agencies.

Senator LEAHY. Let's take a 5-minute break.

[Whereupon, a short recess was taken.]

Senator LEAHY. I would like to wrap this up with a few questions. I know you have enough material prepared that we could probably go on for a week on the same subject, but I would ask your indulgence because I am going to want to submit some more questions for the record. Dr. Cutler, please see that they are answered by the appropriate people.

There are a couple of points I would like to make. One is to reiterate an earlier point that we are not suggesting; nobody on this committee is suggesting, and I have discussed it with the other members that somehow we put rural development research where it competes to the detriment of agricultural research. But by the same token, we do not feel that just because agricultural research is being done, that it suffices for rural development research.

Now, I understand that in areas of rural development research, depending upon how you define it, as much as 75 percent is done outside of the USDA. HEW again, depending on the definition of rural development, does research in this area. HUD, I am sure, does as well as Transportation and other Departments. But I think there is a clear mandate in the law as to what department should be primarily involved in rural development research.

Is there adequate coordination with these other Departments? Is USDA really in the lead?

Dr. **Cutler.** Mr. Chairman, I will have to——

Senator **Leahy.** It is an awfully subjective question, I realize that.

Dr. **Cutler.** I will have to ask for some help on part of your question. I feel sure we are in the lead because the land-grant system out there in every State is responsive to changing societal priorities and has indicated its response by redirecting its faculty, research, and extension activities over the past 6 or 8 years in a major way. There is 5 times as much rural development research going on at these universities, much more extension work related to world development, than in 1970, for example, and that is within a level funding situation. So it is obviously an example of how the land-grant system responds to changing priorities.

As I recall, we were given the lead agency responsibility in this as well as some other areas in the 1977 Food and Agriculture Act and we intend to act as the leaders in the Federal establishment in this area.

Let me ask Dr. Moe, the principal sociologist for our Cooperative Research Branch of the Science and Education Administration, to respond to your question as to the degree of coordination between other departments.

Ed, do you have any handle on that?

Mr. **Moe.** Yes, that was the responsibility from the time of the passage of the Rural Development Act of 1972, but in the first several years there were only two meetings convened of the coordinating group at the Assistant Secretary's level. This group is now meeting periodically.

I see now some very promising beginnings in particular areas, in health and medical care, in aging, and other such areas, where through what was the Rural Development Service, now a part of the new Farm and Rural Development Administration, some very significant beginnings have been made.

In health and medical care, for example, there are continuing meetings of people involved in research from various Federal agencies, and this is communicated within the agencies. Coordination is beginning to occur. We are optimistic that it will continue and become more effective.

Senator **Leahy.** I am asking a very general question, and I am looking for a relatively succinct answer. What is the general role of the Extension Service in this whole area of research?

Dr. **Cutler.** Dr. John Bottom is here from extension. John, would you like to pick that up?

Mr. **Bottom.** As far as extension is concerned, Mr. Chairman, research knowledge is really the foundation of the extension program. It is fundamental to the success of an extension program. We have got to have the research. A very large share comes from land-grant colleges, but we have to draw on wherever the knowledge is available. We have fairly good working relations with HEW and EPA and other departments. Another specific role is to help get the research defined that we really need, and to articulate needs.

Senator **Leahy.** Do you have adequate internal mechanisms to define it, and then to coordinate and bring in what you need?

Mr. Bottom. This is an area that we are concerned about, but many extensions staff members at the land-grant universities also carry research appointments.

When I was at Ohio State, I was part-time research and part-time extension. So it was built in me.

The other thing is that the vast majority of our extension specialists are in the academic departments now. As an extension economist I was also in the department with the researchers. Extension also serves on many of the research advisory committees. I think we are making fair strides.

Senator **Leahy.** I have another rather broad question. Is there any evidence of attempts to include rural people, the ultimate consumers of the rural development research, especially rural minorities, women, community leaders, and low income, into the research priority setting process at the regional planning committee level of the USDA?

Dr. **Cutler.** Mr. Chairman——

Senator **Leahy.** Are we escaping a Washington syndrome?

Dr. **Cutler.** Just as a sort of aside, we are about to conduct a series of regional meetings throughout the Nation focusing on the needs of small-scale farmers.

It will be cosponsored by the Community Service Administration and USDA to tap the attitudes and the expressions of concern and need from something like 100 small-scale farmers in each region of the Nation. I hope this works. It is an attempt to accomplish the sort of thing, I think, you have just described.

On a more general basis, we hope to learn local research priorities from the many community development and home economics programs that sponsor local leadership development and are conducted in rural communities, often on a multicounty basis throughout the Nation.

I have been involved in some of these and have been very impressed by what happens after a group of latent community leaders get together and become more familiar with the local and State and occasionally the Federal political process. They become more sophisticated not only about how the process functions but how they can relate their own problems and goals to that process, and let their concerns be known in an effective way. The result is that those needs are then translated by extension specialists, such as Dr. Bottom and I were at one time. We then put on our research hats. We began to talk about study plans for research projects that addressed these needs.

Obviously this is done on a fairly ad hoc basis, not on a systematic basis that might be more ideal.

Do any of you have a contribution to make to this question?

Mr. Thornton, from Farmers Home Administration, the Associate Administrator. Jim.

Senator **Leahy.** We welcome you here.

Again, this is a witness we are always happy to see here. Especially today, when he has just flown in from Alaska and is probably still bouncing around with all kinds of jet lag.

STATEMENT OF JAMES THORNTON, ASSOCIATE ADMINISTRATOR, FARMERS HOME ADMINISTRATION

Mr. THORNTON. Thank you, Mr. Chairman.

In Farmers Home, of course, we perceive one of our great needs to be mission research. We will provide this fiscal year $9½ billion to as high as $12 billion in credits, including some grant moneys from agriculture, rural housing, and rural county development. Practically all of these funds are being provided on a demand basis. That is to say, we really know very little about the genuine needs of rural communities and people. We have been relying, you might say, upon the grossest of indicators to determine that need as it relates to our requests for program funds.

We feel determining such needs more precisely is of the highest priority. Furthermore, we feel we should be given the financial resources either ourselves or through other research agencies to help us identify those needs.

Of course, as has been indicated here, while we need a certain amount of research to determine need from the standpoint of determining national budgets, that research should be continued and shared, if you will, with individual States and communities so they can also identify what their respective localized needs amount to.

Being a financial agency, we are basically trying to reach for a strategy, if you will, that will put us eventually in a position where we can take those Federal resources, sit down with the States, and sit down with multicounty development commissions and local governments, and try to ascertain how we can jointly apply those financial resources in assisting State and local governments to achieve their planning and development goals. That means that you need a lot of information about what is going on out there, including the interplay and dynamics of those kind of investment decisions.

Generally speaking, I think it is very safe to say in this area there is very, very little information to go on, and we feel there is a need for that.

We have some plans that we are working on now, for instance, as it relates to community facility needs, a national study we hope to be funding very shortly, the amount of which will probably be more than the entire annual budget of the Economic Development Division of ERS.

There are a lot of other questions that need identification. You have to keep in mind Farmers Home Administration is not the only agency involved at the Federal level. There is EPA and HUD and other Federal inputs being made that are not very well coordinated from the standpoint of direct Federal investments, let alone, coordination of research.

Senator LEAHY. Maybe I can leave you with one last, sort of open ended question. Dr. Cutler, you may want to answer it here and have others submit further responses on it. But what can we do, giving us a wish list, on the authorizing and appropriating committees, to help in this area? Because I really think that it reflects one of the most significant needs in this country today. What should we do not just at oversight hearings, but in the budgeting process to change the priority of rural development research.

Would you like to think on that one a little bit?

Dr. **Cutler.** I can respond just tentatively.

Senator **Leahy.** Senator Young has just joined us, and we are glad to have him.

Senator **Young.** I am a little late, but better late than never.

Dr. **Cutler.** I guess I can't repeat for Senator Young all that has gone before or even summarize it, but just in conclusion, if you will, one of the reasons for the establishment of our Science and Education Administration with USDA was to increase the Department's ability as a lead agency to work with other Federal agencies in areas such as rural development research. We are confident that we will be in a better shape in that regard. We are also in a coordination mode with other departments through the Federal Coordinating Council on Science and Technology, of which Dr. Frank Kress in the White House is the coordinator. So we see some opportunities for better coordination.

I believe that the statutory authorities are pretty well in place. What we need to do is fund them. Some of the onus is on us in the Department and in the Administration to provide the appropriately high priority for these programs to see that money for rural development research and extension survives the priority setting and zero base budgeting process for fiscal years 1980, 1981, and 1982. So we can come before you for the next budget with a truly adequate proposal in this regard.

Dr. Farrell, Would you like to add anything?

Dr. **Farrell.** Yes. I would simply add, and perhaps underline the points that Jim Thornton made. Research, if it is to be effective, can't be done in a vacuum. It does have to be tied to and integrated with the delivery system, including the Farmers Home Administration within the USDA. Dr. Cutler has been speaking primarily of the Science and Education Administration. We are not within that Administration but operate as another agency within the Department, reporting to the Director of Economics, although we are attempting to and are in fact coordinating reasonably well with him. I think, as Jim Thornton remarked, it is important for us as the principal policy arm, if you will, in economic analysis within the Department to perhaps make extra efforts to coordinate our research efforts with those of agencies such as Farmers Home Administration, and we do have in motion certain actions to try to improve the process by which the research agenda is established.

On the question of authorizations, I believe I agree with Dr. Cutler, that the basic authorizations are now present. It is a matter, I believe, of the Department sorting out its priorities and getting those surfaced to this committee and others in a way which makes sense to you, and which, hopefully, will be geared to the real needs of people in rural America.

It is a long inexact process, and I think this hearing in and of itself is a step in the direction of identifying those priorities.

Senator **Leahy.** Thank you.

I said I would have a stack of questions for the record, but before this panel leaves, I would certainly yield to Senator Young, who has been on this committee a lot longer than I. He has served on the committee for quite a number of years with my predecessor, Senator Aiken, and has given many, many more years of consideration to the subject than I have.

Senator Young?

Senator Young. You mentioned Senator Aiken. He was a very able, active member of this committee. He sponsored many programs, successfully. When he undertook some legislation or program, he would get two-thirds of the Senators as cosponsors, and he was very effective.

Senator Leahy. Yes.

Senator Young. Just a couple of questions. What type of research would you emphasize or would you start with and how would you go about it?

Dr. Cutler. In the case of rural development research?

Senator Young. Yes.

Dr. Cutler. The needs span the entire gamut of the scientific disciplines from sociology to political science with respect to the needs of local government, the members of county boards, township boards, and town and village council members as to how to carry out their duties more successfully through physical, biological and economic analyses of the economic development opportunities of rural communities, what the constraints are on that development, what the alternative futures of those communities might be.

In this context, we begin to break across the boundary into something called land use planning, but in that context the Department is interested only in providing local government with information upon which they can make their own decisions.

There are problems associated with housing, problems associated with employment and jobs. The Farmers Home Administration is interested in having data upon which to efficiently allocate its resources, conduct its loan and grant programs, to make sure that the water and sewer and housing programs that it assists are appropriately located.

There is just a vast array of data from every scientific discipline that simply needs to be focused on the problems of rural America. Both within the Department and the land-grant agricultural experiment stations, we have hundreds of scientists, an increasing number of scientists every year, addressing themselves specifically to these problems.

Senator Young. I was going to ask you, do you work through land-grant colleges?

Dr. Cutler. Yes, most of the research being done with USDA funds is being done under the Hatch Act and the agricultural experiment stations at the land-grant universities.

Senator Young. The chairman mentioned Senator Aiken. He was a sponsor and originator of certain water programs, rural water programs, I guess, that fit into the Vermont economy. I think there was much need for it and it was a great problem piping water from aquifers to some towns that didn't have water at all. He sponsored a good many programs.

Senator **Leahy**. He also points out that many of these programs are applicable in differing degrees in most parts of rural America.

Mr. **Thornton**. There is a good example. Recently, the Water Quality Act was signed into law which is just now more or less getting into regulation form. This act has some very, very serious implications for many, many rural communities in terms of the requirements that are laid down in that act. Yet, I venture to say, we know very little about what those implications with respect to how many communities will or will not meet those standards. Furthermore, to the extent that they don't, we do not know what those communities are going to be looking at by way of demands on their very meager resources to meet those standards; yet here we are, you might say, just ready for that thing to hit the field, and we really don't know what those implications are going to be.

Dr. **Cutler**. Mr. Chairman, it is conceivable under the new authorities vested in the Department in the Soil and Water Resources Conservation Act of 1977, you might get a handle on some of that information. It is basically a resource appraisal program, but it has obviously got to deal with water quality in rural America, and I would hope the way the Soil Conservation Service and other agencies put the so-called RCA appraisal program together will result in your obtaining the data you need for your side of the program.

Senator **Leahy**. Thank you, gentlemen, very much.

If there are no further questions, I will call for our next panel. We will be sending over a truckload of questions for you.

I will call George Rucker, research director, Rural America, Inc.; John M. Cornman, president, National Rural Center; Dr. Richard D. Morrison, president, Alabama A. & M. University, Normal, Ala., and Don Hadwiger, Department of Political Science, Iowa State University, Ames, Iowa.

If you would all come and join me up here at the table and give us your names so that the reporter will have them in line.

Mr. **Morrison**. I am Richard Davis Morrison.

Mr. **Rucker**. I am George Rucker, of Rural America. There is a corrected copy of my statement. There was a page missing.

Mr. **Hadwiger**. I am Don Hadwiger.

Senator **Leahy**. I understand that Mr. Bannerman is unable to be here. Mr. Cornman, president of National Rural Center, we are starting a couple of minutes early on this panel, will be joining us.

Gentlemen, I would like to say to each of you that your statements will be placed in the record in full. All three of you have been here so far today, and what I would like you to do is, if you could, summarize for us your statements. But please comment on the administration's testimony. Having heard the testimony earlier, you know the general areas that I am interested in.

We sent out some questions to you already. You may want to respond to them or direct your summary to the important concerns we have with rural America, and the dramatic changes taking place there. And why we do not have an adequate research development base to guide in program policy.

Whether it is in this committee or in the Appropriations Committee, on which both Senator Young and I serve, or in any other committee, we are constantly voting for, supporting, and endorsing programs that are going to affect rural America. And yet we don't have an adequate research base, whether it is in health, transportation, agriculture, or other areas to assist us in this process.

And so having set that stage with a longer speech than I intended to give, why don't I just start with you, Dr. Morrison.

STATEMENT OF DR. RICHARD D. MORRISON, PRESIDENT, ALABAMA A. & M. UNIVERSITY, NORMAL, ALA.

Dr. MORRISON. I am used to coming first because Alabama A. & M. is the university in Alabama that is called on first when it comes to making reports, but it comes in last in funding.

Senator LEAHY. I see.

Dr. MORRISON. I have a short statement here which I asked my executive vice president to prepare for me because he had worked in the extension service here in Washington for 12 years. It is a rather hurriedly put together statement, but I hope that I will have an opportunity later to answer questions because there are some things that I would like to say perhaps that will not be said at this level of discussion.

As I listened to Dr. Cutler and others, I thought about the grass roots and how the essence of his thoughts might get down to the grass roots. His outlines on paper and his statements are beautiful, but implementing them is another thing. When they get down to the grass roots it becomes very sticky in some instances for some people.

Cooperative extension programs—I speak mostly for 1890 land-grant institutions. For those of you who may not know what 1890 means, these are the land-grant institutions that were brought into being 28 years after 1862, because in the South, where there was a separation of the races, blacks could not attend 1862 land-grant institutions, although the Morrill Act said these colleges were formulated for the people. We were not counted among the people back in those days.

Consequently, 28 years after 1862, the Second Morrill Act was passed, which made possible the 1890 land-grant institutions, which were separate and stayed that way until recent years.

Cooperative extension programs in 1890 institutions are concentrated primarily on the following high priority areas:

Agriculture, natural resources, and the environment: The major objectives are to contribute to the production of food and fiber in the most economical and effective manner; assist small part time and other farmers in adjusting to environmental quality and safety regulations; assist in identifying major problems for research consideration and action; assist with control of pests; and other problems affecting agriculture and forestry.

Community resource development: Emphasis in this area will be on organizational and leadership development; land use planning; recreation and tourism; community facilities and services; manpower development and training; and comprehensive community planning.

Home economics: Emphasis in this area is focused on food and nutrition education; housing and home furnishings; textiles and clothing; consumer education; family relations; and health and safety. Special emphases are placed on home management and consumer competence.

4-H youth development: Emphasis is placed on the total development of youth and young adults. This includes leadership development; responsible citizenship; and effective and efficient use of time.

We believe that these program components comprise a comprehensive integrated extension program. The areas are interrelated and supportive. Our clientele consist of people of the State wherever they live—rural, urban, farms and nonfarm. Shifts in program emphases are made in keeping with needs, conditions, and circumstances affecting people for whom the extension program is designed. The people themselves, are involved in determining programs and program priorities.

Extension efforts at 1890 land-grant institutions are developed, implemented, and evaluated by mutual agreement, in cooperation with the 1862 land-grant universities. Thus, extension programs conducted by 1890 institutions are integral parts of the State cooperative extension program. Such an arrangement maximizes the unique competences and capabilities of participating institutions without destroying or limiting institutional autonomy.

Again, the intent is for the cooperative extension program to be developed jointly by participating institutions with neither having veto power over the other. The purpose is to assure the future of the 1890 land-grant institutions and Tuskegee Institute as full and equal partners in the land-grant system and to consider and make use of their contributions.

These 1890 institutions are already making a unique and valuable contribution to agricultural research and extension, and their potential for further contributions is great. Our institutions have an interest and commitment to the full measure of educational efforts required to solve social and economic problems of people. Moreover, they have rapport with people—the "unreached" and the "hard-to-reach"—who need educational assistance and who have not received it. These institutions are dedicated and capable of servicing the usual and other needs of people wherever they live.

Senator LEAHY. Thank you, Doctor.

Dr. MORRISON. I was rather rushed. I have other statements I would like to make that are relevant to some of the statements that were made this morning. Would you like me to make them now or make them later?

Senator LEAHY. Why don't we go down to each member of the panel and come back for questions. We will include them in the questions.

Also, we note for the record that we have been joined by Mr. John M. Cornman, president of the National Rural Center. We are delighted to have you here with us today.

The next witness is George Rucker, the research director of Rural America, Inc.

Mr. Rucker, again, I will have your full statement inserted in the record. I am particularly interested in your thoughts on whether you feel the present data base is adequate. And do you feel that when you are dealing with rural data generated by Federal agencies it is useful and available to you and to local rural people? If that doesn't give you an opening, nothing will.

STATEMENT OF GEORGE RUCKER, RESEARCH DIRECTOR, RURAL AMERICA, INC.

Mr. RUCKER. I will start by submitting for the record a copy of a working paper which was prepared for our conference last fall—the Third National Conference on Rural America—on "Issues in Agricultural Research," and I will, as you suggest, go very briefly over my prepared statement rather than trying to do it all.*

I think, first, I would make the point that whether it is a public agency or private agency, an agency's research agenda tells you a great deal about that agency and what one can expect from it, and that is why I think these hearings are so important.

Even if this administration is as good as it sounds or manages to sound in terms of recognizing the needs in the field of rural development research, I think the fact that they know that you and Senator Young and your colleagues are looking over their shoulders, even if it is approvingly, is going to increase their joy in their good works as they fulfill all of those nice things they say they are going to do.

Senator LEAHY. I think it might focus their attention a little bit.

Mr. RUCKER. Yes, I think it will help to get their attention in the traditional way.

Senator YOUNG. You have a good combination with Senator Leahy and I. We are the only two Senators that serve on both Agriculture and Appropriations.

Mr. RUCKER. Without going into the details of our unhappiness or our painful awareness of the shortcomings in the data base for rural development research and rural needs research, and the responsiveness of the Government to those rural needs, I think we might make a couple of points.

First is one that I think was made already this morning. The fact is that while the Department of Agriculture is the sixth largest Federal agency in terms of research and development outlays, it counts for less than 10 percent of all Federal research and development outlays even if you exclude military, space, and energy, and more importantly, about 90 to 95 percent of the Department's research is in the field of agricultural production and marketing; and one can question that sort of a priority mix when it is true that the farm population now accounts for less than 4 percent of the Nation's total population and only about 15 percent of even its strictly rural population.

So that it seems to us that the research agenda of the Department of Agriculture has not shifted as rapidly as its constituency's characteristics have shifted. But I think if we had to put our finger on the single most pressing need, what you very frequently find is the case: It is not so much a problem of knowing what needs to be done—it is a problem of getting the commitment to do it, and I think that we would say that the real need is the need for a commitment at the top of this administration to the importance of a real Federal rural development policy because you can't separate policy and research.

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*See p. 296 for the prepared statement of Mr. Rucker and p. 299 for the working paper referred to above.

Research can't and shouldn't attempt to substitute for policy, and policy shouldn't try to indoctrinate research, but the two elements need each other. Policy formation needs good research to enlighten it and make it more rational and good research needs to see itself as having a relationship to the policy formation process if it is to escape irrelevance and sterility.

We have some fresh winds and new directions in the Department of Agriculture research program. At least we have the potential for them, but if we are actually going to have them it needs to be clear that the development of a national rural policy is a real item on the administration's agenda and not just a concern for balanced rhetoric.

It needs to be clear that rural development research has a role to play and not just to put together a report that will fulfill the letter of congressional mandates.

I suppose in responding to your question about what is our past experience, the most frustrating thing we find—and it is the same sort of shortage that some of the witnesses from the Department referred to—is the surprising inadequacy of the social and economic data we have on an urban-rural basis or on a metro-nonmetro basis.

In my prepared testimony I even quote from a statement of the Department of Agriculture on the other side in some recent hearings. We continue to find it frustrating to try and analyze the distributive aspects of public policy because of the shortages of the kinds of data that will enable us to do it. The list is too long to try and go over it all. It runs from unemployment data up to credit and financial institution data—which was already mentioned this morning—data on retail trade, and data on cost differentials, which the chairman has referred to this morning.

One of the most frustrating aspects is that the Government agencies frequently don't know, and that means they don't care about the urban-rural or metro-nonmetro distributional patterns of their program activities. So what we would hope for, if there were a real commitment to rural development research, is that the Department of Agriculture will begin to push some of these other agencies to make, when they are making surveys and in-depth analyses of their programs and their program needs, that they will be sure that they take a look at the special situation of rural areas and small towns.

Senator LEAHY. You see USDA as the focal point in doing that kind of pushing?

Mr. RUCKER. I think that is the assignment they have under section 603 of the Rural Development Act, and I think it is a logical and much needed assignment. It doesn't make any sense, obviously, for three departments to do the same research. Also if there is not the coordination, then the research that is relevant to rural areas too often falls between the cracks and nobody does it.

Senator Leahy. Yes.

Mr. Rucker. Another thing that we would like to see is the Department, with administration backing, insist that all agencies with program responsibilities in rural areas collect their program statistics in such a way as to allow those of us on the outside to analyze how well they are meeting their responsibilities. That is a continual frustration. On the one hand, you can't get adequate needs data for rural areas and small areas, and then when you do you turn around and try and see how well the programs are meeting those needs, and you can't get the right kind of a breakdown on the program statistics to measure the one against the other.

And just a kind of a specific task that we would like to see: We would like to see a major initiative on the part of the Office of Management and Budget to upgrade the quality of the Federal outlays data.

Now, it has to be said to Economic Research Service's credit, that so far as I know, they were the first people to take those outlay tapes and begin to do some analysis of them in terms of metro-nonmetro patterns, and as a matter of fact they were looking at those things long before the National Journal talked about the Sun Belt versus the Frost Belt on the same kind of data, but they weren't the National Journal so nobody paid any attention to it.

The fact of the matter is that even though that is the broadest single category of Federal impact data that is available on a geographical basis, since it supposedly runs across the whole budget, a lot of times the actual figures are very, very mushy, and this is, again, I think, because nobody has made it clear to all of the agencies involved that they are really to turn out good data for that service. They think it is just something that Sargeant Shriver got the President to OK back in the 1960's and they turn in the numbers to the Community Services Administration every year, and half of the time, unfortunately, they are projections. They are not necessarily based on data, and some of the projections are good and some of them are not.

But it would be a very, very useful data base if it could be upgraded in quality.

Finally, I think a real commitment to rural development research might find USDA doing some evaluations of other agencies' programs to see how well they are serving the needs of rural America. I think it is interesting that Congress, when they extended the life of the Community Services Administration, gave them the authority to evaluate other agencies' programs to see how well they were serving the interests of lower income people.

It seems to me that the section 603 mandate in the Rural Development Act gives the basis for the Department of Agriculture to do the same sort of a job of evaluating other programs to see whether their constituency, which is rural people, is really being adequately served.

I think it is quite clear from the testimony this morning and elsewhere that present leadership of the Department of Agriculture is aware of the directions that need to be taken on rural development research. But for that awareness to be reflected in meaningful change at the Agriculture Department and other Federal agencies, it seems to me there will have to be more than an awareness. At a minimum, there will have to be evidence that the Carter administration considers rural policy as important as urban policy. We have yet to really see that evidence but perhaps with the continuing prodding of the legislative branch, which has been ahead of the executive branch on this issue for a number of years now, we don't need to give up hope and we are particularly appreciative for this chance to add our bit to the prodding.

Senator LEAHY. Thank you.

Rural America has been, I think, a very effective and very responsible prodder in this regard and I hope that these hearings both today and tomorrow will add to that. I can assure you they will not be a one-shot hearing. They will not be forgotten. They will be followed up.

The next witness on the panel is Professor Hadwiger. Senator Young, feel free to break in with questions at any time.

Senator YOUNG. Thank you.

Senator LEAHY. I ask the witness in his summary, because he has had experienced in studying the agriculture establishment, to assess the likelihood of new initiatives being established in agriculture research. And also if you would tell us when talking about research priority setting, how we in the Congress have either contributed or retarded rural development research initiatives. Please feel free to be just as frank as you would like.

STATEMENT OF DON HADWIGER, DEPARTMENT OF POLITICAL SCIENCE, IOWA STATE UNIVERSITY, AMES, IOWA*

Mr. HADWIGER. Mr. Chairman, I appreciate the chance, as a political scientist who has got some interest and kind of background in rural development and agriculture policy and research, to comment on this. I am a little bit of a historian, too, and maybe a little bit of just everything. But I would like to address the question as to initiatives but sort of getting into it in terms of the thing that strikes a political scientist, I think, in looking at this, that you do have the Rural Development Act of 1972 and other kinds of legislation that has been authorized, and by who. As far as we can tell nowadays, it is a nice, broad, balanced coalition. It includes farmers and commodity producers, it includes representatives of small towns, it includes consumers, environmentalists, and public action groups, and in that sense it is a broad group that manages to get a nice concensus for authorizing legislation in 1972 and again in the farm bill of 1977.

It seems to me that that kind of thing needs to develop, and that it is the authorizing committee which brought it together in the first place and which can develop it further.

It seems to me a second function of this committee—and this is in reference to the question you asked—is to try to reassure the members of that coalition, all of them, that things are being done in a balanced way for rural development; for example, that in the case of people who represent minorities, that minorities are being served in this process so that they continue to support it.

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*See p. 309 for the prepared statement of Professor Hadwiger.

I think that job of reassurance, through rather deep knowledge of what is happening in your program today, is really vital to develop that balanced coalition with respect to initiative. What kinds of assurance can you give about what we might say, is the establishment that does these things now?

I think you can be reassuring. I think the answer is, yes, it does take initiatives, but with some explanation and some recognition, obviously, that it is a very mixed situation. We are dealing with a lot of different organizations here. There has been a history of bias. There has been a history that I think we know well in terms of focusing on the production programs, by and large, rather than the other things that have happened in rural America.

There has also been a stress on efficiency in terms of social system, helping those people who are most efficient.

There has been a tradition of sort of ignoring the towns. This omission, I think, is just completely documented now with the research that has been done by social scientists as well as by Presidential commissions and others, and it is a history that you just can't forget. But at the same time it seems to me that we are likely to trap ourselves as much as if we said, well, the U.S. Department of Agriculture was the first great poverty agency, as indeed it was, and therefore, we have the Department's history as a poverty agency.

The Department of Agriculture and the agricultural establishment have got several histories going, and it seems to me the recent history is one that we could say positive things about—for example, Mr. Cornman may talk this morning about the essential process of getting citizens interested in what they can do in their community and provide them with an information base. It seems to me, as I see extension, that they were sort of pioneers in this area. They did get the essential process going, and in that sense they were among those taking initatives.

They have also had the impulse to establish a data base, which researchers are among the first to see the importance of, and which they possibly hope to sell to the community and to the Congress.

They also helped to establish, in my State particularly, the regional governments. There are mixed feelings about those governments, but basically those multi-county and multi-city governments have been very helpful in some of our low income and rural areas. On the other hand, they have needed considerable encouragement, it seems to me, in turning to poverty per se, in turning to ethnic groups and minority populations. Their bias has been in terms of serving majorities. They have needed some encouragement in dealing with small towns, but it seems to me that if you look at the environment in which it is all happening, if you look at the passage of the Rural Development Act and no funding, if you look at the "off-and-on" signals that have come to them from the national level, from the Department of Agriculture, from various committees in the Congress, that, indeed, even under those circumstances they have taken some initiatives in this area, so you can be reassuring.

I think that cutting title V and some of the other things that have happened—whatever kind of balance sheet you may come up with overall—have been disconcerting in the long run anyway.

We have heard the testimony already today, and this is the impression that I get.

Senator **Leahy**. I think you can understand from my questions my own concerns about title V not being funded.

Mr. **Hadwiger**. So I would just make a couple of comments, somewhat humbly here, about what kinds of remedies the authorizing committee can do in terms of first getting developed a balanced coalition, and secondly, getting a reassurance among that set of people and among the public at large that rural development research is needed and is useful and is doing these things.

It seems to me one thing that has happened is when Congress in the authorizing process specifies criteria for things to be done, as in the case of the food stamp plan, that they tend to be done. When it comes along with a strong presence, as in the case of the Select Committee on Food and Nutrition, things tend to be done, and that that sort of strong presence and oversight is important.

As the last thing that I would mention to you, I would borrow the term "essential process". We talked about what you need to do to get rural development started. What do you need to do to get attention on rural development here if what you have is legislation that sort of becomes meaningless by virtue of the fact that one administration and sometimes two don't really take it that seriously, when the Office of Management and Budgets somehow finds it necessary to cut it totally out, and when the House Appropriations Committee cuts it at the end although, the Senate Appropriations Subcommittee usually finds it possible to restore just a bit of it. I guess some kind of essential process has to be undertaken to see that R. & D. in this field, particularly when legislation is authorized, as in the case of the Rural Development Act, doesn't just raise high hopes that are followed by quite a bit of cynicism on the part of the people who are carrying it out.

Senator **Leahy**. Thank you.

The last witness on the panel will be John Cornman, who has joined us from the National Rural Center.* The National Rural Center, along with Pennsylvania State University, conducted an evaluation of title V. I would be interested in hearing some of the more important findings, and also whether you feel there are major issues and problems facing rural people which have not been addressed by USDA land-grant research, and then, of course, any other points that you would like to cover.

STATEMENT OF JOHN M. CORNMAN, PRESIDENT, NATIONAL RURAL CENTER

Mr. **Cornman**. The answer to the second question is easy, yes; but I have to pull my thoughts together on the first and on some of the comments which have been made this morning. I usually find myself at such meetings as one of the more moderate participants. I am not sure I will be today.

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*See p. 121 for a letter from Mr. Cornman to Senator Leahy dated Feb. 14, 1978.

I am less than sanguine about the commitment of this administration to rural development, mainly based on their decision not to fund title V. I will get back to why I think that is a useful program, and discuss some steps that we think would carefully expand that program without raising expectations too high but to allow a valid test. Very briefly, the signal that the administration or the Department of Agriculture sends out when it does not ask for funds for title V—and it is my understanding that that decision was not made in the Bureau of the Budget; it was made in the Department—is that all the people at the land grants who have been doing something in rural development outside of agriculture find no commitment at the top, find no interest at the top, and are left out on the limb. I will get back to title V in a minute.

First, let me turn to the whole question of development policy. I am sorry I was late and didn't hear the earlier comments, but what you were really getting at is the fact that there is no place in the Federal Government where development policy, if you take the broad definition of development, is debated.

Congress is divided up by subject matter, and so too the administration and executive branch. That is one reason you don't have very good data bases because they are spread over a host of different agencies. I want to get into some ideas of how to correct that. It seems to me Congress could take some action with two institutions of which it has control. It might be helpful to instruct the Congressional Budget Office to organize a development sector, for now they too are divided up by sectors.

You might ask the Library of Congress to do a similar thing. Then you might get some ideas on how to restructure OMB, but that is a tougher question. But until you start to put some pressure on and have a vehicle which allows somebody to comprehensively look at development problems, both urban and rural, you are going to have a hard time getting a data base together. Now, back to title V.

We found that title V did not work everywhere, but we found that where it did work it provided a very important and perhaps the critical link between the research community and the people who needed the results of the research.

We found it very useful in making what we call action programs work better. Here we are talking about funding programs, the housing programs, the sewer programs, and highway programs, whatever else. It helped the local people make more informed decisions on what their goals were and how to use the existing resources to get them.

I don't want to overpraise title V. In some States it was very bad, in some places nonexistent, and others it worked very well.

Senator Leahy. What were some of the major characteristics in those areas where it didn't work as opposed to those where it did?

Mr. Cornman. You start out with the fact there was little money provided for title V. If you are critical, you say some States hid behind the other States. If you are kinder, you say, that there wasn't enough money to do anything so the States couldn't do much. Some other States that had a very little bit of money, with a lot of imagination, were able to get a lot of contributions in time and so forth, and these were among the States in which title V worked well. They went out and started the involvement at the local level. They found out what the people said they wanted, whether it was a health clinic or a bakery. They did a study on that, whatever it was, the local people determined what they thought their development goals were. That is a classic example of how extension and research are supposed to work for the benefit of people. The extension people brought back the information. Here is the problem. The title V people had access to the broad resources of the university, oftentimes going outside the Agriculture Economics Department. Down at the university, including the public relations department.

Senator **Leahy**. You are saying that when it works, it is more of an ad homonum thing. Are you also saying that there may be two areas with basically the same kind of social and economic conditions, basically the same kind of communities, and in one case title V might work and in another case it might not? Then, the success depends upon the attitude of the people involved, and not on the structure of title V.

Mr. **Cornman**. Title V helps to deliver information, what I would call unbiased, good, credible, scientific information, to help you make some choices. If the people don't want to make any choices, it won't work. It is a bottoms up process, or it should be.

I think we have had a lot of experience in trying to implant development goals from above communities that either didn't want them or the goals didn't fit, so that doesn't work very well either.

So, yes, I think any development process must begin with people, and the people have to want it. They may have to be educated about the possibilities of it. I think that is true, but if a small town doesn't want to do anything, neither title V nor anybody else is going to make them do it.

One of the things that smaller towns and rural communities need most is what I would call broadly technical assistance. What is out there? How do we get it? What are the proper approaches to solving the problem? You go to a small town and the mayor is the barber or undertaker and has no staff. What does he call on for resources? Who does he call on to try to help frame the problem and the trade-offs?

We go into some detail in our piece about the Essential Process. Let me back up a moment, title V was not an Agriculture Department initiative I understand. It came out of Congress, and I think Congress should take credit for it, and I think Congress ought to watch over it. I think Congress ought to do the best it can to see that it continues and not at the same low-level funding. That doesn't do much. Either you increase it so you get more people involved in it because it passed the early test, or if all we are going to do is keep it at the same level, I guess I would say don't worry about it.

Senator **Young**. Could I ask a question?

Senator **Leahy**. Surely.

Senator **Young**. What agency of the Department of Agriculture handles this program? Is it the Agricultural Research Service?

Mr. **Cornman**. It is under Assistant Secretary Cutler.

Senator **Leahy**. Science and Education Administration.

Mr. **Cornman**. It is a line item.

Senator **Young**. It is a line item in which department?

Mr. **Rucker**. Science and Education.

Mr. **Cornman**. The money goes to the State on a formula basis, and the 1860 land-grant university is the lead agency.

Senator **Young**. I have been active on the Agriculture Subcommittee on Appropriations. I was chairman 25 years ago when the Departments were in, and I know how the budget process works. The Office of Management and Budget tells the Secretary of Agriculture how much money he could have.

Mr. **Cornman**. This didn't get to OMB. It was cut out in the Department of Agriculture, as I understand.

Senator **Young**. Then the Secretary goes to the various departments and agencies, and he presents their budget and tells them how much he has and he has to stay within the budget that OMB sets.

Our Appropriations Committee can earmark funds, and often we ask how much did you ask for this agency, and he is supposed to defend what they were given, but if we ask them how much they asked for, then they can tell us, and often the committee will put the money in and direct them how to spend it.

Mr. **Cornman**. In this case they will say none. They never asked for anything. The decision may have been made to come under the limits of OMB, but it is my understanding the Department did not ask for any money for title V.

Senator **Young**. No one in the Department asked for it?

Mr. **Cornman**. I am sure you will find a few people. How far down you will have to go, I don't know. But I think at least at the Assistant Secretary level no money was asked for title V. I think I am right on that. I will stand corrected if I am wrong, but I think that is correct.

Senator **Leahy**. For once the bad person is not OMB.

Mr. **Cornman**. That is my understanding.

In the essential process, we recommended that $20 million be provided for title V, with a number of safeguards to allow for careful expansion. For example, we recommend a way to make sure that States where there are 1892 colleges, they have full access to the program and participate in the administration of it.

We urge there be an evaluation ongoing with the project as it expands, so we have some idea whether or not it is working, whether or not we were correct that the low level of funding in the beginning was the one reason it didn't work in some places. We also recommend it be opened up to other universities so that if the land-grant university in a particular State doesn't want to participate or do a good job, we go to other places and see what they can do.

Senator **Young**. Is there any matching of the funds?

Mr. **Cornman**. There is no matching. In the States where title V worked best, though—and we came up with a figure which was very soft because it is hard to do—I think something like from two to eight times as much time of other people in the university as what the program bought. So there is a lot of in-kind contributions in the sense of using the resources of the university.

Senator Young. Personnel?

Mr. Cornman. Yes.

I guess if I could come back to the point I started with, cutting it off does send, I think, a very bad signal out to people in the land-grant system and other places that want to work on rural development problems.

I think one of your questions was whether rigidity within the system prohibits or discourage certain kinds of research. It does exist. It is much easier to publish and get tenure and get promoted if you solve a major agriculture problem, and the reward system is not for trying to go out and do something for rural development. That is one of the things that held it back, and now with title V taken away, it reenforces the rigidity.

Senator Young. The Agricultural Research Service has had a considerable influence on all research programs in the past. We do emphasize production. They have gone more to nutrition and other programs. There were people within the Agricultural Research Service years ago that were strong for nutrition research but it is only in recent years that we have put much emphasis on it.

Mr. Rucker. I think it is significant, Chairman Leahy, that Assistant Secretary Cutler this morning talked about the title V program as a marginal program when he was defending it. He was saying we feel it is more important to continue the funding level for the basic program—the basic Hatch Act funding—because that is what the faculties plan their recruiting on and et cetera, et cetera, and not these marginal set-asides, and he did talk about it in that way, which only, unfortunately, reenforces the signal that Mr. Cornman is talking about, the wrong kind of signal.

Mr. Hadwiger. I was going to emphasize that title V is applied research and a researcher previously doing more theoretical research in part has an opportunity here not to do something in a very applied way for small communities. That has been sort of overlooked here. Title V pushes people into direct applied research, and insofar as there has been funding available, that has been a very important thrust which may be lost.

Senator Leahy. I would like to ask Dr. Morrison a question. One of the things we have to consider is the funding and working relationship between the black land-grant colleges and other land-grant colleges. If you could discuss that relationship, and how it affects the allocation of rural development research funds to your universities? Also, how does it impact on rural development activities for rural black people and other minorities?

Dr. Morrison. Yes, Senator, the point has been made that there is very little money in the rural development program. I think in Alabama it is something like $47,000. In most States the director of extension is designated to head the rural development program in that State.

There are some exceptions, but this is the case in Alabama. I wrote President Philpott of Auburn University, which is an 1862 land-grant institution, asking to be placed on the rural development committee. I was appointed to the committee; after several meetings it was decided that we would select a specific section of Alabama in which to work. A three-county area was chosen where a model program is being conducted.

May I point out, that any time Federal moneys are sent into the South and the 1862 colleges are made the funding agency to handle those funds, it is very difficult for minority institutions to share, on an equitable basis, in that funding whether it be funds from revenue sharing, extension, or other sources.

The 1890 institutions were not permitted to participate in research in agriculture until about 1966 when Public Law 89–106 was passed. I think it was about $1½ million put into this for research to start with, Senator Young, and we—16 1890 land-grant institutions—asked for some of this research money. The results followed pretty much the pattern of things.

Out of Public Law 89–106, we were allocated $283,000—less than $18,000 per institution—with which to do research work, but this was a beginning.

I talked with Secretary of Agriculture Freeman about the need for research funds for 1890 institutions but I didn't get any additional funds. Finally, in 1972 under Secretary Hardin's administration, we rescinded, through Chairman Jamie Whitten's committee, a sizable increase in Public Law 89–106 funds, which is temporary money; and under section 3(d) of the Smith-Lever Act of 1914, we were granted for the first time funds to participate in the extension program.

I jotted down a point that I wanted to express—mostly about USDA, Hatch, and Smith-Lever. It has developed in the Southern States, at least, that these agencies are kind of sacred cows insofar as anybody else entering into or participating in their programs. They are controlled, more or less at the county level, by those people who participate in the program, and we—the 1890 institutions—have just been shut out for the most part.

Speaking about the Food and Agriculture Act of 1977, my executive vice president and I had the privilege of helping to write the language in title XIV, sections 1444 and 1445. This language pertains to 1890 institutions and Tuskegee, who for the first time in the history of the land-grant system, are accepted as full partners in the system fundwise, because it says that they will receive not less than 15 percent of Hatch Act funds for research work in 17 institutions; and not less than 4 percent of the extension funds for these same institutions. There is no doubt about it, we have expertise in dealing especially with low-income farmers and rural people. I think this was demonstrated back before the turn of the century with the work at Tuskegee Institute done by George Washington Carver and, of course, Booker T. Washington initially.

I think that we don't like to go back and take account of what happened a way back there, but some of those things worked. Without any aid from the Federal Government, those programs back there made it possible for black people to make enough money to send their kids to college.

I am a product of those times. I came up through the system, and I know what I am talking about. I don't have to read books to find out anything about the history of extension and agricultural research.

I came up through the system so I know what the discrepancies have been.

I think that the present administration in USDA is trying to do a better job of correcting discrepancies, because I have been able to talk with the Secretary and get some things done and he has made some promises, but we will have problems at the grassroots level in being accepted to do what we know how to do, both in extension and research.

Right now we in 1890 institutions are insisting that we have just one Extension Service and not a separate 1890 Extension Service. Yet some people say that we are trying to set up a separate Extension Service. Presently, that is pretty much what I have to say about the situation.

There is another thing that bothers me in this discussion here today: We have talked about research and the importance of research. Yes, research is very important. We ought to know more about the lower income people, for they are the people we have not been able to get much information on, and I think that is one reason why U.S. Congressman Jamie Whitten went along with recommending funding for 1890. We say there hasn't been any research done on low-income people, and we need to engage in that. It seems as if everybody has forgotten about the poor people.

The other thing: When we do research and it becomes pretty effective, it gets away from the poorer people and the more affluent take it and make money out of it.

A typical example: We developed in our research at Tuskegee and at Alabama A. & M. some new sweet potato varieties, disease resistant and all this, more of a candied yam type. Lo and behold, you know who got after those sweet potatoes? Not the poor farmers that we were trying to help but some commercial farmers came in and bought up nearly all of the seed potatoes available. This is pretty much what happens.

Research is very important, but there are some things that happen that are practical, that are applicable, to improving the lot of low-income farmers and smaller farmers. A typical example, a farmer trying to raise blueberries when birds insist on eating them. In some areas birds are afraid of snakes. Some farmers tell me all you have to do is take a piece of garden hose and lay it up in the blueberry bush like a snake and a bird will not go near it. What kind of research is this? This may not work in a city area where birds don't know about snakes. So you may have to do some other kind of research. Incidentally, a garden hose may keep some youngsters out of the blueberries and some old folks, too. Nevertheless, these are the kinds of things, I think, we ought not to ignore. What are those good practices out there that people have developed themselves that we don't know anything about, that if we knew we could help people use more effectively in doing what they should do to improve their plight.

Senator LEAHY. Does anybody else have something they wanted to add on these areas or any other area we have covered here?

Mr. CORNMAN. Just to follow up on that one, we touched on that subject of including 1890's in on the title V program. It wasn't done very well in many places, very few places, and our original recommendation was to provide a separate appropriation for title V for the 1890's.

We were convinced you might run into some problems on constitutionality because the whole title V program is based on a formula of so much per State, but if that is possible we would recommend that. If that is not possible, we recommend—and this may work for some other kind of rural research programs—that any kind of State title V program has to be agreed to by both the President of the 1860's and 1892's. If they cannot agree, the money be divided among them or between them, based on the best work balance.

I would make sure we are thinking or trying to get some extra money or new money in for title V that you don't overlook that problem, making sure the 1890's are part of it.

Senator **Leahy**. I think Dr. Morrison makes a good point and it follows along the lines of what we have been saying here today. What is the kind of research available and, of course, what benefit does it have to the whole spectrum of rural America, be it agriculture, health, transportation or anything else? And I suspect that low-income rural America isn't being reached to the extent that the colleges of 1890 have been precluded from this funding in the past. And yet, any one of us who would say that there is not a need here would be terribly naive.

Dr. **Morrison**. The thing that really hurts us, we have developed the expertise in dealing with these problems and we are being ignored.

Senator **Leahy**. That bothers me very, very much, and I suspect it bothers anybody who has a very real interest in rural America.

Senator **Young**. You give some excellent examples of what you were able to accomplish. This is very important for the Appropriations Committee which is dealing with thousands and thousands of subjects. When you give some examples of how the money is being spent, what you are doing, just as you did today, that is the best way of getting funds.

Dr. **Morrison**. It worked with Congressman Whitten's committee. It was through that committee that funds for 1890 institutions and Tuskegee were approved, both for extension and research.

Senator **Young**. And this program, too, if you appear before an Appropriations Committee, if you can cite examples it helps a lot.

Senator **Leahy**. Earlier we had Professor Hadwiger's comments on how we might watch over these things here in the Congress. Professor Hadwiger, should we be looking at establishing a Select Committee on Rural America that really watches and coordinates these programs?

Mr. **Hadwiger**. Well, the select committee was brought into existence in the case of the nutrition people as a sort of merged committee. I am not sure that is needed here. I guess a subcommittee like your own has got that authorization. The select committee, I suppose, points out the specific large problem areas that it can devote itself to. I think, for example, if you had staff assistants to look at these programs, if you had a presence through a select committee, and the staff, that that surely would make a difference. It will be basically, you know, positive reenforcement.

Senator Leahy. I asked the question realizing the possibility of getting new select committees at a time when the Congress has been trying to do away with them, to be rather slim. It seems to me that the select committees supported by a very vocal and effective lobby will continue. Those that don't have such an effective lobby, but are doing things that are good for the people, like the Select Committee on Nutrition, tend to disappear and are absorbed into the larger parent committees. I must admit that until people on my staff, Fred Schmidt, Dave Clavelle, Ken Pierce, and others, brought these matters to my attention, I was not aware of the problems on research. Yet I consider myself as a Senator who pays particular attention to rural America. On the Appropriations Committee this year, when examining the various programs under the jurisdiction of the subcommittees I serve on, I attempted to determine what the impact on rural America would be. Time and time again that kind of analysis could not be provided. I was told that it had not been done. The only constant available data was a per capita breakdown for each program. But that does not mean very much in terms in assessing the actual impact of a program.

The more I saw the more I began thinking that a lot of programs have built-in urban biases. The housing program, for instance, under section 8 is great if you want to build a 20-story housing project. But a town in Vermont of 1,000 people, with only one paved road, which is the main road of the town, could use two or three units of such housing. However, it is a lot easier if you are applying for a 10- or 20-story building compared to a few units. I think the highest building in Vermont is five or six stories. This sort of bias is what is upsetting to everybody, whether they are in North Dakota, a large rural State that is twice as large in population as mine or in Vermont.

Senator Young. Not that.

Senator Leahy. Everywhere you look trying to find out how programs are going to impact on rural America you can't find an answer. Again, I hope these hearings will be instructive to those of us on this committee, as to the pressing need for detailed data and analyses on rural problems, and the Federal Government's ability to rectify them.

Senator Young. There aren't too many Members of the Senate who are interested in rural America. They represent the huge cities and populations.

Senator Leahy, as the Senator from Vermont, will carry out the fight for rural America, but I wish we had more of them.

Dr. Morrison. May I cite this example of discrepancies in programs intended to do good, housing and so forth? In Alabama we are farmers, and I have heard farmers say to Secretary Bergland when they asked him a question: "Why is it when I go to borrow money from the Authority that I have to pay 5, 6 or 7 percent interest, and another man down the road, who happens to be white, can borrow money for 3 percent interest?" These are the kinds of things that happen that you wouldn't know about. They are maneuvered at a local level.

Senator **Leahy**. Of course, that points up a great problem we have here. There is so much to be done in rural America that is going to require significant input from the local level rather than from Washington. And yet, how do you do that and insure that the basic locals goals aren't subverted? I realize we could go on for hours and hours on this issue, but we have reached the end of the time for the hearing today. So I raise the point for us to be aware of it and to try hard to provide an answer as best we can.

I am going to ask each of you four gentlemen to answer any further questions we might have after reviewing today's and tomorrow's testimony.

I would also ask that if you have any items that you would like to add to the record to send them to my attention. I can assure you that I will read them. Make them as far-ranging or incisive as you would like. I am not pretending at all by these 2 days of hearings that we are going to develop all of the answers. We are not, and I suspect that we are going to find very significant roadblocks, whether it is from this administration or any other administration in focusing people's attention on the very real needs of rural America.

Thank you all very, very much.

[Whereupon, at 11 a.m., the subcommittee recessed, to reconvene at 8 a.m., Friday, May 5, 1978, in room 322, Russell Senate Office Building.]

RURAL RESEARCH IN USDA

FRIDAY, MAY 5, 1978

U.S. SENATE,
SUBCOMMITTEE ON AGRICULTURAL RESEARCH
AND GENERAL LEGISLATION OF THE
COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY,
Washington, D.C.

The subcommittee met, pursuant to notice, at 8:10 a.m., in room 324, Russell Senate Office Building, Hon. Patrick J. Leahy (chairman of the subcommittee) presiding.

Present: Senator Leahy.

STATEMENT OF HON. PATRICK J. LEAHY, A U.S. SENATOR FROM VERMONT

Senator **LEAHY**. The Senate Committee on Agriculture, Nutrition, and Forestry's Subcommittee on Agricultural Research and General Legislation is in session for hearings on research in rural needs in USDA.

The first witness scheduled for today was Al Navarro, executive director of the National Rural Development and Finance Corporation. I understand Mr. Navarro has been delayed, so we will go to the first panel, which represents the National Association for State Universities and Land-Grant Colleges.

It includes Lee Day, director of the Northeast Regional Center for Rural Development, Cornell University in Ithaca; Dr. Thomas Dowe, dean of the College of Agriculture, University of Vermont in Burlington; Dr. Lee Kolmer, the dean of the College of Agriculture at Iowa State University in Ames, and Lowell Watts, director of the Cooperative Extension Services, Colorado State University in Fort Collins, Colo.

Gentlemen, if you would please all come up here and join me at the table and make yourselves comfortable.

Gentlemen, I am delighted to have you here. If you could just give your names in order, starting with Dr. Dowe, the reporter will have them in the proper order.

Dr. **DOWE**. Yes, sir, Senator. My name is Thomas W. Dowe, dean of the College of Agriculture, University of Vermont.

Dr. **WATTS**. My name is Lowell Watts. I am director of the Extension Service, Colorado State University, Fort Collins, Colo.

Dr. **KOLMER**. My name is Lee Kolmer, dean of Agriculture, Iowa State University, Ames, Iowa.

page 42 blank.

Dr. **Day**. My name is Lee Day, director of the Northeast Regional Center for Rural Development located at Cornell University.

Senator **Leahy**. Gentlemen, I am glad to have you here. I apologize that the Washington spring, which is usually the only really nice time of year down here, has retrogressed somewhat. And to make it even worse, when Dean Dowe came in, he was quick to tell me that while I am down in Washington—looking last night at hailstones, among other things—he and the rest of my constituents in Vermont have been enjoying unseasonably nice weather. I reminded him of the fact, however, that last weekend when I was up there it was snowing to beat the band. [Laughter.]

Dr. Dowe, why don't we start with you? I would like each one of you to summarize your written statements for me. The written statements, of course, will be part of the record. Following your summary I am going to have a number of questions for each of you gentlemen to answer as you feel best.

Dr. Dowe, we will start with you.*

STATEMENT OF DR. THOMAS DOWE, DEAN, COLLEGE OF AGRICULTURE, UNIVERSITY OF VERMONT, BURLINGTON, VT.

Dr. **Dowe**. Senator Leahy, it is really a pleasure to have this opportunity to be with you. I would like to in my opening statement also say that Dr. Russ McGregor, from the National Association of State Universities and Land-Grant Colleges had quite a bit to do in getting this panel together, and I want to thank him for that.

Another point I would like to make is that we have tried to bring you here a diversity of people interested in rural development. For one thing, I come from the State of Vermont, which is, by some definitions, the most rural State in the Nation. Only one other State, Wyoming, is classified by the Bureau of Census as having no metropolitan area.

We have Dr. Lowell Watts from Colorado. He is out in what we refer to as the western region of the country. He comes off the eastern slopes out there, and he has a mountainous State that is similar to Vermont, but it is larger and spread out.

We also have Dr. Kolmer from Iowa State, who comes from one of the Midwestern States in the north and central region, and with a very diverse population and many problems in rural development.

And then we have, for a national view of the thing, Dr. Lee Day, who is, as we mentioned, director of the Regional Center here in the Northeast.

So I think we have a good diversity here to begin with.

I would like to also refer to the fact that the Department of Agricultural and Resource Economics from the University of Vermont wrote a letter to you in which they summarized many of the activities. I think it is a good letter. They put a lot of thought into it, and I think I can start by saying in 1977 the Vermont Agricultural Experiment Station had about 71 active research projects.

Of these, nine are classified as rural development projects, and seven of the nine projects are in the department of agricultural economics.

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*See p. 313 for the prepared statement of Dr. Dowe.

The department had a total of 12 projects, including those 7, so that 7 out of the 12 projects that they had were in rural development.

This means that that department, which is a small department, is devoting quite a bit of effort to the rural development effort.

I have prepared here for you, and I am just going to refer to this briefly, and I refer to some of these problems we face in Vermont as a matter of record since I know that there is no one more familiar with the needs of Vermont than you are, Senator, but income in Vermont is quite low. Only 12 States in the Nation have an average income per capita lower than that in Vermont. Most of this is in the rural areas of Vermont. This indicates to me that we need some way to increase the income of the rural people.

The Extension Service is conducting training programs for rural residents to raise the competency level of business skills. We are trying to work in it. Our problem is that we are short of funds and we could use additional help in this, financial help.

Another important thing I think we need to keep in mind is that rural Vermont is experiencing a significant increase in population. Between 1970 and 1975, 1 out of 4 of our rural communities had population growths exceeding 20 percent. That is quite an increase in a rural area in a 5-year period. Another 33 percent experienced rate growths ranging from 10 to 19 percent. So we are getting quite an influx of rural people, and these people are interested in staying in the rural areas, and they are interested in maintaining our rural community.

We do have research underway at the university in the agricultural experiment stations to measure migration into the rural communities. I am not going to go into that much detail on the rest of them, Senator. I just wanted to get those into the record.

For example, the cost of local government operations has risen drastically in recent years. Some way or another we need to provide a means where the towns can cooperate and pool machinery, and pool different types of operations to reduce their costs.

Another situation is that professional services are concentrated in the more urban areas. This is true of much of the fire protection, much of the health delivery systems, and other types of systems. Somehow or another we need to have research whereby we can bring this out to the rural communities.

Interest in small farms is increasing, and we are seeing an increased interest in small ruminants, such as sheep and goats, an interest in people raising a few beef cattle, possibly some swine.

Home food consumption. People are interested in providing more of their own food, and we want to work with them on that.

Another increased interest that we see is wood as a source of energy. And this is one where we need to do some work.

Another area where we need to give a considerable amount of consideration is farm and forest property tax stabilization. Rural housing is a critical problem throughout Vermont and we need to be concerned about that. I can say more about that one later but it is an important one.

Senator, as I say, I have been rather brief here. I think that in the questioning to follow the discussion period we can bring out much more of the interest in some of these problems, and certainly these aren't all of the problems that exist. These are some that I wish to highlight, and being a college professor, we are programed in for 50 minutes generally. [Laughter.]

We have 4 hours of talk in here. I am going to pass this on over to Dr. Lowell Watts from Colorado, who will bring us an Extension viewpoint on this.

Senator LEAHY. Dr. Watts.*

STATEMENT OF DR. LOWELL H. WATTS, DIRECTOR, COOPERATIVE EXTENSION SERVICES, COLORADO STATE UNIVERSITY, FORT COLLINS, COLO.

Dr. WATTS. Thank you very much. On behalf of my colleagues in Extension, I would like to express our appreciation to you and your colleagues for your efforts to dig into the process of the rural development and some of the governmental interventions that might be helpful.

We see rural development consisting of many factors, and obviously agriculture is one of them. But I think that since this role of the land grant universities, both research and extension, is very well understood I would like to concentrate most of my comments, at least verbally, on the so-called nonagricultural aspects that we think are also important.

Senator LEAHY. I think that would be extremely helpful to this committee because, while this is the Subcommittee on Agricultural Research and General Legislation, it has an extremely broad jurisdiction. Within our definition of research, we have the traditional agricultural research, an activity of extraordinary importance to this country, and it will be even more important as years go on because of our necessity to not only feed our own people but to export food for any one of a number of political and humanitarian reasons. The fact that our balance of payments are in a complete shambles and we are never going to achieve a balance simply with arms sales. Nor should we. But the one area that we can come closer to balancing payments, of course, is in agriculture. Having acknowledged the critical importance of agricultural research, the major focus of these hearings is my concern as chairman and the concern of all other committee members—that includes a very broad range of philosophy—that there is not adequate research being done on all the other areas of rural America, be it housing, transportation, the quality of living, health, or anything else.

It is extraordinarily important for us to hear what the land-grant colleges have to say.

Dr. WATTS. In response to these comments I don't want to at all belittle the agricultural importance. I think we can take that for granted and start from there.

In my own State of Colorado, for example, I might illustrate two aspects of rural development. We tend sometimes to think only in terms of the declining community which, as Dr. Dowe has indicated, is short on professional expertise and is posed with a variety of problems.

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*See p. 318 for the prepared statement of Dr. Watts.

In northwest Colorado, and in the mountain part of Colorado we have explosive growth, and it is exploding in communities that are quite small. And the front end costs of development in Breckenridge, Vail, Aspen and Steamboat Springs, where the recreation industry has impacted, in Craig, Rangely and Meeker, where we have the oil shale and coal extracting industries we have all kinds of community problems that also, I think, are relevant to the consideration of your committee. These have not been adequately researched in terms of how communities deal with these problems, what kind of a data base they need to work from, and it seems to me that we need very badly to have additional attention to assisting these communities with a broader flow of information that pertains to the whole sociopolitical arena as well as to the specific areas that relate to many of these kinds of problems.

We are concerned in the extension arena about how communities make community decisions. And we see the land grant operation here as critically important. Our government, as I would see it, has had a penchant to throw money at problems, and sometimes more than just a little penchant for that.

There are really substantive needs for massive infusions of funds to do things for communities that are not within the purview of the land-grant universities, and these are important. To me, however, as a taxpayer, as an administrator in a land-grant university, as one who has staff that deal with these communities, I am concerned with prioritizing the decisions so that the funds that are available can be used on the priorities that help those communities.

As you know, Senator, the unique characteristic of the land-grant universities, and particularly the extension services, is the fact that our agents, our off-campus faculty that live in those communities—are, in my judgment, as well attuned to local problems as anybody we have around. They live with those problems. They are the link to the university's research base. We see the need for developing community leadership, the ability for communities to analyze the problems that they have and then to apply the best research information we can give them and making some priority decisions, and are organized to deal with the problems of community development, community stability, crime, housing, this whole arena that Dr. Dowe was making reference to.

I guess that while we feel that providing dollars is critically important, providing leadership and assistance and encouragement to these local communities is something which is also critically important. This can be both in and outside the area of agricultural development.

I will conclude by just making reference to one other aspect of the discussions that I understand you had yesterday with the Department of Agriculture. The research and extension in the land-grant system has been characterized by continuity of funding. I believe this is critically important. You can't turn research on and off, and you can't turn on and off an education or development process.

I happen to be a member of the Joint Committee on Agricultural Development of BIFAD that is working in the international arena for the land-grant universities. We see here under title XII the evolution of a longer term concept in terms of doing our international development work. It used to be that we thought of it in terms of AID projects 1, 2, 3 years at a time. Now, we are looking toward some more continuity, and the ability of the universities to be able to commit on a longer term period.

This same thing is true in the United States. If the land-grant system has been successful, in my judgment it is because it has had some continuity, and I would like to stress that point because the in-and-out sort of thing is, I think, not the most effective way to go.

I think we have been criticized for lack of intensity in rural development, but I would say to you in all sincerity that at the State level I believe we have tried to adapt in the rural development area to an extent that exceeds the financial capacity that we have been provided through Federal leadership.

It is my understanding that Assistant Secretary Cutler yesterday indicated that the extension community rural development program nationally totals up something like $54 million. As we computed this, if you take the people assigned to rural development programs in extension, we come out with about $38 million. The difference here is probably the amount of time that the county agents are spending—that is, computed into a dollar total that brings it up to the $54 million.

I believe he indicated that of that amount something like $20 million was Federal support. I don't understand where that figure came from. There has been $2.5 million in this year's budget for title V of the Rural Development Act, $1 million nationally under our 3(d) Smith-Lever money for rural development. That is $3.5 million. And I am concerned about the fact that most of the rest of this $38 million, or $54 million, however you compute it, has really been the reidentification of priorities at the State level, and/or the assistance by the States and the counties.

I have one county, Rio Blanco County in northwestern Colorado, that has just put in the entire amount of money for an additional extension agent in rural development. This is the extractive industry impact—entirely county money. And I would like, frankly, to urge the leadership out of the Department of Agriculture and the funding from the Federal establishment to keep up with this thrust. I think it is important that we have the tie federally. I think it is important that we have some capacity for expanding.

Our biggest problem is that there are too many community problems for us to deal with and deal with effectively both in research and extension with the funding that we have today. I think we do have a capacity to provide service. I would say to you we are sincere in our interest in doing it, and we do believe that we are short on resources to get that job done.

Thank you.

Senator LEAHY. Thank you.

Concerning your question about Dr. Cutler's statement on the amount of money involved, I think it may be wise to utilize that as one of the questions that we are going to submit to Dr. Cutler for the record.

Dr. Kolmer.*

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*See p. 316 for the prepared statement of Dr. Kolmer.

STATEMENT OF DR. LEE KOLMER, DEAN, COLLEGE OF AGRICULTURE, IOWA STATE UNIVERSITY, AMES, IOWA

Dr. KOLMER. Thank you, Senator Leahy.

I too am very pleased to be here and talk about some of the problems we see in rural development in Iowa. I think many of the Upper Midwest States have many of the same problems.

We look at rural development as the process, for the most part, of research and extension that is put together with the objective of providing the best possible information to nonmetropolitan citizens and policymakers so that they are in an improved position to make decisions concerning economic development, the development of the institutions that serve the local people, such as, community facilities and services, housing, environmental quality, and also, the leadership in the organizational process that must be developed and maintained in the rural communities if there is going to be a viable and thriving community.

I think the major problem in this area of research and extension is that much more needs to be done to get information to citizens, leaders, and policymakers at all levels, not just at the State level, or the Federal level, but also down at the local level, including unincorporated communities. This major shortfall in research and extension could come as the result of several things.

There is strong, and I think very justified competition for the available research dollars to support priority work in agriculture. In our State we have, depending on prices from year to year, about $7 billion off-farm sales in agriculture. It is a highly competitive, highly sophisticated industry. You don't transfer money from work in corn breeding, or animal breeding, or genetics to rural development in a cavalier fashion under those conditions. But this doesn't make the need for rural development extension and research work go away.

We really have had no growth in USDA support of our research programs for quite a number of years, and the erosion in real dollars since the title V 1972 act was passed has become quite serious. We only started with $1.5 million each for research and extension in the first place. Our share of this is approximately $90,000.

And, very candidly, there is a certain cynicism developing out in the States, not just in the land-grant institutions, but out in the communities, about the Federal administraion and establishment's rhetoric about the need and importance of rural development and the amount of money that is allocated to it in terms of real dollars for help; for information, for research, and for extension.

It has sent a very strong message to the people in our institution at any rate. They don't really believe the Federal establishment views this as a serious problem. Local people feel that if rural development were viewed as being important, we would do like we do with the rest of our problems in this country, we would throw some dollars at it.

One thing that is lacking in this area: There is not really a strong and organized constituency pressing the case for the rural development. It is a rather unsung cause, as people talk with you and with other people who have interest in this area.

It is not research, and it is not extension in the traditional sense. It is a mix. It involves the research worker and the specialist working together from the beginning, and from the beginning working together with the county agent and the leadership in the local community, if it is going to be successful, because there has to be a confidence building process and a conviction that you are aiming at the real problems that affect the community. The leadership has to be involved at the beginning.

We need more conceptual research in terms of what is the nature of the community structure. What is the nature of the functions of a community under different sets of conditions. The expectations of the citizens of an unincorporated community of 500 as compared to a county seat town of 5,000 are substantially different. We need the accumulated information. I don't know if you would call this research, but it is needed, and I don't really care what you call it. If it is needed, we need to do it, to pull together the information that is relevant to this community in both the macro and microsense, the small problems and the large problems, how they relate to the State capital perhaps, or to the county seat town as well as what and how you do something about fire protection or health care in the local community.

We need to work with people to do research on systems of identifying problems and causes of problems for the leadership in the local community. If they don't know how to identify problems they are really at a loss until they get at the core of what issues are facing them.

And we need to really work on it in a problem-solving sense of bringing the problem to the fore and then marshaling the information and working with local people in solving it.

When you work like this it is a little different than our usual research and extension activity within the land-grant university because of the nature of the problem. It is location specific. You can't have a research project at Ames, publish the results and its fits everywhere. You can't really do that in production agriculture research either. We have 11 locations outside of Ames because of differences in soils and climate. Rural development research needs to be made in each community. I worked with small retail businessmen in such communities when I was an extension specialist. We had to develop information based upon local conditions in each community because they mistrusted results that were not based upon local data.

There is not much time to do this in most cases. The time frame is short. It needs to be designed and conducted, in a process of interaction between local people, the researchers, the specialists, the extension people and the administrators. In one 6-county area we wound up putting a man in there as part of title V and working on a research and extension program. He had to work with 26 States, local and Federal agencies in order to get the job done. This takes time, and it seems like we spend an awful lot of time doing nothing while you are getting the stage set so something can happen.

Senator LEAHY. Part of the problem we have, of course, is that so much of the rural development initiative gets directed from Washington and so little of it is determined at the local level.

Dr. KOLMER. And when they don't determine it they don't believe it many times.

Senator **Leahy.** I agree with you, Doctor. I see a pervasive attitude here in Washington which assumes that they can develop programs for the average State, or the average town. I am not sure if there is such a thing as an average State.

Dr. **Kolmer.** In rural development neither of those exist really.

Senator **Leahy.** Exactly. I was going to say if there is an average State, it is not Vermont, and it is not Iowa. If there is an average town, it is not Ames and it is not Middlesex, Vt. I think we just make a terrible mistake in Washington if we operate on that assumption.

I appreciate what you are saying because I am not convinced that in Washington based planning the message that Washington and its environs are a rather unique area, unique in high-income levels per capita and urban concentration, gets across. I chuckle when I read in the real estate sections that if you go out to northern Virginia you can buy your own farm—as much as 1½ acre in some of them—for $70,000 or $80,000 an acre.

Dr. **Kolmer.** And we thought ours was high. [Laughter.]

Senator **Leahy.** Obviously the generalization pertains to those—who own 5-acre ranches as well. It just doesn't make sense but it indicates one kind of mind set. I am getting you way off your point and I apologize. Please go back to your testimony.

Dr. **Kolmer.** In our judgment, the conduct of a successful rural development research and extension program is an enterprise that requires some modification of the traditional research and extension process. It is really a knowledge development process. It is information packaging and interpretation, and it is a repetitive process. All these small location-specific problems and ventures, in one sense are the replications that a plant breeder uses, or an animal breeder uses as he develops his research.

To say again, it is a problem that is a joint effort by the specialist involved and the decisionmaker involved. It cannot be working independently if there is really going to be a successful program.

I would like to sum up by saying that the important areas which have have identified by several regional and State committees include research and extension programs related to needs assessment, financing, delivery and organization of community facilities and services. This includes both public and privately provided services, such as, health, social work, sewer and water, housing—we have a serious water problem in many parts of rural Iowa—transportation, police and fire protection, all the things that those of us who live in larger communities rather take for granted.

We need some research—and this is kind of reinforcing what Mr. Watts said—on the interactions and the impact of the population migration and economic development within the context of natural resource policies. What is going to happen in Colorado and Iowa if a new industry comes in and the effluent from their plants violate the Water Quality Act or the Clean Air Act? How is this going to be handled and resolved with the leadership base that exists in that small community, because the leadership in small rural communities is very, very thin? Everybody has at least six jobs.

One thing I would like to say. I have heard an awful lot over a number of years that the reason we aren't getting more research and extension work in rural development is because the college of agriculture administrators won't allocate money for it, and faculties aren't interested in it and won't do it. I don't know where this comes from, but it is simply not true. I think the evidence is there that we will allocate money. The evidence is there that the faculty and the extension staff is interested, because while the Federal leadership and contribution toward the process has not really increased, the States have continued to make a substantial investment in this area from State appropriations, county appropriations, and our extension programs. We are interested in it, and we are really talking about some support to get it done.

The staff, not just in sociology, but also in technical agriculture are concerned about these problems because they see the implications of these problems in relation to the success or failure of technical agriculture enterprises in those rural communities.

We have about 20 to 30 percent of our college of agriculture graduating classes returning to the farm, well-educated people. They are not going to be interested in farming in a community where the school is so bad they don't want to send their kids there. They are not going to be interested in farming in a community where there is absolutely no social life, no social structure that they could interact with, but rather, they have to go to Omaha, Des Moines, or Minneapolis. They aren't interested in this. They see their living patterns as being more important than just farming and making money, in the good years. In the last year they didn't make too much when it was dry.

But, it will take leadership. It will take some money. We have a system that can get into every small rural community through the land-grant system, a structure that is already in being. We don't have to reinvent the wheel. They have the competence and the contact with the local community. We are not talking about resources anything like what they talk about as the Defense budget. It is really a very modest amount as compared to some of our other expenses. But we are talking about the need for the Federal Government, as well as the States to support this endeavor and really not expect it to go away just because we talked about it.

The one thing we are not talking about, Senator, is we are not talking about another reorganization, another reshuffling, some more rhetoric, some more dust but no progress. That is it.

Senator Leahy. Thank you, Dr. Kolmer.

Our fourth witness is Dr. Lee Day, the director of the Northeast Regional Center for Rural Development in Cornell University, Ithaca, N.Y.*

STATEMENT OF DR. LEE DAY, DIRECTOR, NORTHEAST REGIONAL CENTER FOR RURAL DEVELOPMENT, CORNELL UNIVERSITY, ITHACA, N.Y.

Dr. Day. Thank you, Mr. Chairman.

I, too, am appreciative of your invitation to appear here this morning.

The outline of this hearing, which was sent out by your staff, indicated a concern for the research priority advisory systems, so I will direct most of my remarks to that.

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*See p. 310 for the prepared statement of Dr. Day.

As you well know, there are a larger variety of formal and informal systems of advising research in the land-grant system, particularly in rural development.

Senator LEAHY. Excuse me, Dr. Day, I wonder if you could speak up just a bit more. Some of the people who are here in the audience are going to be testifying later this morning. I have asked the different panelists to feel free to add to or subtract from anything said before.

I might also note for the record, and for you four gentlemen, that at the conclusion of the hearing today, if you are like me, usually when you have a situation like this one you think of many things that you had intended to say. Our hearing record will be kept open for 1 week to 10 days or so and if there are additional things you want to add, the record will be kept open so that you will have the opportunity to do so simply by writing it down and sending it to me.

Please go ahead, Mr. Day.

Dr. DAY. I will concentrate then on research priorities. I will talk mostly about formal systems. Every college of agriculture has some formal advisory systems, sometimes called a research advisory committee, or an extension advisory committee, or, in a lot of cases, just a college of agriculture advisory committee.

A second formal advisory system is a national regional planning system, and the third is the Federal Government—Congress and the executive branch, although clearly they are more than just an advisory system to the land-grant research system.

I will try to make some observations about their formal systems. The college of agriculture advisory systems typically is made up of people who meet 2 or 3 days a year in one or more meetings. The membership of these advisory committees is largely made up of successful farmers, leaders in farm co-ops, and leaders in farm organizations with lesser representation from such groups as bankers, local government officials, League of Women Voters, and seed and fertilizer dealers.

In these meetings, the dean or chief administrative officer of the college will give an overview of the program and then the faculty or department chairmen will describe portions of the programs. Then there is a thorough discussion by the advisory committee, which is probably the most fruitful part of the activity. At the end of the meeting there may be some formal recommendations and some discussion as to what particular portions of the college program they want to take up in depth at the next meeting.

The second formal advisory system is the regional planning system. I would have said the national-regional planning system, but right now I am a little confused about the future role of the national planning committee vis-a-vis the joint council established under the Food and Agriculture Act of 1977.

As you know, back in 1965, there was a long-range study that was mandated by the Congress. I think it grew out of the flak between the administration, under Secretary Freeman, and the land-grant system regarding the administration proposal to increase the competitive grant funds and decrease the formula grant funds. I think the Congress at that time thought the USDA and the Land-Grant System ought to, in today's language, "get their act together." So they mandated this long-range study.

Out of that grew a number of things; the Research Classification System, the Current Research Information System known as CRIS, and finally the National-Regional Planning System. I won't talk about the Regional Planning System in all the regions because I am not familiar with those outside of the Northeast.

In the Northeast we have what we call "steering committees." We have 10 steering committees but not all of them have made their reports to the experiment station directors. But these 10, out of a total of 40 areas that have been identified at the national level, cover about 80 to 85 percent of the total research in the Northeast.

I will talk specifically about the rural development research steering committee. It is made up of 10 scientists from the land-grant system, mostly ag economists and rural sociologists, and one ag engineer. There are seven researchers from the Economic Research Service, now a part of ESCS. They are all researchers. But in their deliberations there was other inputs. Part of their deliberations were based on some ad hoc committee reports that were prepared in such areas as economic development, housing and community services. In the community services ad hoc committee I recall we had a number of specialists, county agents, and Tom Davis who was connected with the social services department of the State of Vermont.

Senator LEAHY. He was the secretary of human resources in Vermont.

Dr. DAY. So I say that while the committee itself was made up entirely of researchers or research administrators, there was input from people who worked very closely with local communities.

I am on the rural development steering committee. We haven't made our report to the experiment station directors as yet but we have identified about seven high research priority problems, including some of the things that Lee Kolmer was talking about earlier; such things as interlocal government cooperation, and how can you save some money by working together with other local governments rather than supplying all the services yourself.

A few observations about these two systems. I think we have to admit that the college of agriculture advisory committees are dominated by farmers and others that are concerned with production and marketing. The steering committees in the Northeast were dominated by the researchers, and I think it might raise some questions in your mind, does rural development really have a chance in the land-grant system in the Northeast.

Senator LEAHY. One of the things that has come up several times—and I have heard this from people when we were preparing for these hearings, and when I have gone around the country talking about the problems in rural America—is that, even USDA and land grant college administrators who are sympathetic to small scale farming, and sympathetic to that host of problems that go along with health, housing, nutrition, legal services, schools, and so on in rural areas, can't stand up to the heat of the agricultural pressure groups when establishing research and program initiatives.

Really, what does that mean? Do we have a dichotomy of pressures, in decisionmaking? Or do we have an overriding pressure group in here and are you talking about a second type of pressure group that might detract us from these very real needs of rural areas?

Dr. DAY. I think the record really doesn't support the idea that rural development and research doesn't have a chance. I called what used to be the Cooperative Research Service and tried to get some information about rural development research efforts in 1970–76, I think you could quarrel about the definition of rural development research, but there was about 50 scientific years of effort in 1970, according to their figures, and it increased to about 83 scientific years in 1976.

Frankly, I was surprised, not by the rate of increase, but the absolute level. I think if you went through that data base very carefully, project by project, knocking out a lot of those that didn't concentrate on group decisionmaking, I think you would cut that figure down considerably.

But even though the advisory system is characterized as dominated by agricultural concerns the records show that rural development research is small but growing at a fairly good rate. I will admit, I think this domination of the agricultural interests is a constraint on the level and the rate of growth of rural development research. But yet, you also have to admit in many areas the agricultural industry is the major part of the economic base.

Senator LEAHY. Especially when you deal in rural America.

Dr. DAY. Right.

Senator LEAHY. Let me throw out a question and ask, starting first with you, Dr. Day, and then working up to Dr. Kolmer, Dr. Watts, and Dr. Dowe, each of you to respond. Should we be looking at alternative ways to fund rural development research? Or what is your appraisal of alternative ways of funding it?

For example, you have special grants, formula funding, categorical funds and earmarking. We went into this issue in detail with the USDA yesterday—especially the lack of funding for title V. What form of funding is preferable? Should we put heavy emphasis on any one of those funding forms? Do we need to put special emphasis on any one of those to the exclusion of others?

Dr. DAY. I would suggest putting the special emphasis on two of them. One is title V. As Lee Kolmer has mentioned in his testimony, and I have in my testimony, the key thing about title V has been the joining together of research and extension at the local level. I am not saying that that is true in all States, but in a majority of them I believe it is true: where research and extension people work together on very site specific types of problems. And we have seen research and extension working together in title V in ways that they would not have been doing otherwise.

I think that is very important because that is a different kind of research. It is very locally oriented, not the kind of thing that you try to generalize to the whole State. Sometimes they are able to do some adaptive research, take some research that has been done elsewhere and adapt it to the local situation. I think that if we don't have title V we are going to lose that close tie between research and extension, and the involvement of local people in identifying what are really high priority problems as they see them.

Senator LEAHY. Then you don't agree with the lack of funding support for title V at all for fiscal 1979?

Dr. DAY. No; I think title V was a very innovative sort of thing, not the least of which was putting together action titles and education titles, research and education titles in the same piece of legislation.

Senator **Leahy**. You said you had a second area, too.

Dr. **Day**. The second area would be the formula funds for Hatch research. I referred to having ongoing research that you could adapt to the local situation. You have got to get there fast, and get some answers in a timely way so that the people can try to solve their problems. It is of real concern to them now not 2 or 3 years from now.

I would like to see us increase the formula funds in the Hatch and title V funds. As to competitive grants, there is an awful lot of time wasted in preparing grant applications and, as these others have testified, you have to have some dependable continuing source of funds in order to keep a research and an extension program going.

Admittedly, special grants are one way of redirecting the land-grant system. But special programs like title V are also very good for that, and in a continuing way.

Senator **Leahy**. Dean Kolmer?

Dr. **Kolmer**. I concur with Lee Day. I would like to add a little to it. I think many States like our State took title V in the spirit in which it was passed. For example, the assistant director in the experiment station is responsible for social science research. He is also an assistant director in the extension service for title V. And so, he is responsible for both the research and the extension activity and that means it goes together.

I don't think I can overemphasize the need for continuity and the ability to plan ahead, not just for the convenience of the administrators of land-grant institutions but for the credibility out in the local community. If you tell them they have to have a grant plan, they have to make a grant application—they have made grant applications for sewer, water and everything else. They are fed up to the eyeballs. They will say it is another show coming on stream, wave a lot of flags and nothing is going to happen for 3 years.

Senator **Leahy**. One of the things I often do in Vermont—because it is a small State which enables one to travel around easily—is to go around and hold town meetings with my constituents. We have the New England tradition of town meetings in March, but I do them throughout the year. I will visit a small town—most of our towns are—and sometimes take both Senator Clark and Senator Culver, our great advocates for rural America along with me. In these situations the local people don't let us forget their concerns at all.

For example when we go into a small town, and meet in a local school, town meeting hall, a church or any local facility and invite people in, citizens are encouraged to ask questions, make speeches, do whatever they like. In every town meeting situation there is one item that will invariably arise. It will be raised by the chairman of the board of selectmen, or the town clerk, or the road commission, or someone in an official capacity. And they will say, "Why do we have to put together something like this—devote so much time and energy—to get what usually is a relatively small grant". What is even worse, occurs when those who, because of some minor technicality, or their inability to handle the grants applications are unable to get support for programs they should have.

I have made it a point never to get into a discussion of trying to explain to local people how to fill out giant applications because I couldn't begin to fill out most of those forms.

Please go ahead, Dean Kolmer.

Dr. KOLMER. I think also talking about changing your direction to the grant system, on the surface it may look very good when you get finished with a grant program. There will be stacks and stacks of tables filled with publications but I don't think there is going to be much of it going out in the country because the grant is the objective, and meeting the deadlines and so forth, and nobody is really concerned about the problem out there unless they have got to get some information to help them fill out the final grant report.

We are not talking about very glamorous work. We are talking about some pretty nitty-gritty work of going out there and working with some people that are kind of stubborn sometimes. Not all the stubborn ones are in the Northeast. Some are out in the Midwest.

Title V also contains the formula funding concept. Furthermore, title V has a requirement that provides for a State advisory committee that is not dominated by agriculture. However, in a State like Iowa, the local community has agriculture as the economic base and if agriculture is not involved nobody is going to come to the meetings. Agriculture is what is in those communities, and that is all that is in most of those communities, the man that sells feed, fertilizer, or fuel or the man that is using those supplies, or the person that buys the output of that farm. And the local ministers, the local school teachers, they are all dependent on agriculture, and so the community is dominated by agriculture. The only way you are going to get useful development done is through people in agriculture because they are all in agriculture.

So, I would go along with what Dr. Day said, the continuity becomes increasingly critical as we look at the problems in rural America because they are not getting smaller, there are more of them, and each one is bigger as each set of new regulations comes out of Washington regarding the climate, the air, or something else.

Senator LEAHY. Thank you. Dr. Watts?

Dr. WATTS. I would like to be a little less pessimistic than Dr. Day was about advisory committees. I was glad Dr. Kolmer mentioned the title V advisory committee because it does set in motion by law the different kind of advisory structure. This may be State specific to my own operation, but our advisory committees vary, as Dr. Kolmer indicated, from counties that are predominantly agriculture where you do have a very heavy agricultural interest base, to some of our urban counties where agriculture is not predominant, and where the nonagricultural interests then begin to show up on the local advisory committees as being basically a mix of heterogeneous interests, and I don't believe it is all that difficult.

I am not as concerned, in other words, about the domination by the so-called ag production interests in our State. They are important. They are there. They are part of the decisionmaking and should be. But, there are lots of other concerns.

I believe on both our State and many of our county advisory committees for extension in Colorado we have a very diverse kind of representation. I would like to second also the title V and formula suggestions because title V, from a congressional standpoint, it would seem to me, has the advantages to you as a legislator of having some accountability track that can relate to this particular allocation of funds. I think if I were in your shoes, I would sort of respond to that. I think this is a lot easier for the Department of Agriculture or for the Congress to keep track of than if you have a lot of categorical grants that are scattered all over. It is very, very difficult to pull those in together where you can evaluate impact totally, so I support both the title V and the formula funding.

Dr. DAY. Could I add just a little bit?

It was mentioned here that the rural development advisory councils have broad representation. But, in addition to that, many of these rural development projects in local communities have a formal or informal local advisory system. Sometimes it takes the form of a fairly representative selection of people in the community, but it also takes another form.

Some of these title V projects will utilize a telephone survey of a random sample of people in the community to determine their view of the real problems in that community. Local government officials sometimes have difficulty finding out what it is that people in their community really want. They often hear the pressure groups but don't hear from a broad representative sample.

I just want to indicate that under title V, some local advisory systems were established in addition to the mandated State advisory council.

Senator LEAHY. Thank you. Dean Dowe?

Dr. DOWE. Senator, I would like to speak for the State of Vermont and not to the others because I think this problem that we are discussing is a State specific one, as Director Lowell Watts here mentioned.

I have discusseed this particular point with the staff and faculty in the Department of Agriculture and Resource Economics, and we have no evidence of any suppression of any good, legitimate rural development research by any group in Vermont. When we undertook title V, we went and discussed it with our college advisory committee, which is not dominated by hard core farmers. It has a wide, broad representation. We discussed it with our extension advisory committees, and we have an extension advisory committee in each county. We discussed it with our statewide advisory committee. And these committees are not made up entirely of farmers either. They are elected to those boards, and anyone in the county can run for those advisory boards. So they have quite a diverse group of people in them.

When we undertook title V, I also called in all the county agents, the home dem agents, and the youth agents as separate groups and discussed it with them. And we had no evidence of any suppression or attempted domination by any group. I think there was a real welcoming on the part of everyone in the State that this was coming off.

And I think that Dean Kolmer made a point a moment ago that should not go unnoticed, and that is, even in the heavily oriented farming communities, the people that are going into those communities want to have rural development so that they can have the advantages of some of these things that the people in the urban areas have. I think that is a real point, don't you, Dean Kolmer?

Dr. **Kolmer**. Very definitely.

Senator **Leahy**. I think the point you make is noteworthy because the recent population trends show a dramatic increase in the population of rural areas. And yet, in my estimation, rural America has not been the focus of attention as far as the Federal Government is concerned.

Dr. **Dowe**. I would like to make one further comment. You indicated a number of means of financing rural development research and extension activities. I think it is vitally important that we have this outreach program so that as the research is done, that somebody can take it and put it into an action program in the community.

You mentioned funding under title V—formula funding, earmarking, and so forth. I would support very strongly the formula funding under title V. Title V, in my estimation, is an attempt to get at earmarking of funds. For some reason, these smaller programs, such as title V, have never fared too well in the Federal Government. This title, I remember very well the kickoff on this back in the early days, we had a big meeting out in Iowa, if you will remember. It was really a dull affair about how important this research was and how it was going to be funded up to an authorization of $20 million. We have never gotten over $1.5 million, I think, out of it.

Senator **Leahy**. We never had any problem authorizing it. Appropriations have always been the sticker.

Dr. **Dowe**. Another one that has never been funded at its authorized level is McIntyre-Stennis, and here is another one the forestry boys a few years ago set up this McIntyre-Stennis in order to fund the forestry at a higher level. That one has never been funded at its authorized level either.

Senator **Leahy**. Senator Stennis and I are working on that to some extent in the Appropriations Committee. Hopefully, we are going to come up with something better in that area.

Dr. **Dowe**. I just want to make one more point. Let me say that I am not against competitive research grants. I think they are all right, but I do not favor them as competitive with the formula funding, such as has occurred in the executive budget this time where they took the money out of rural development, they took the money out of McIntyre-Stennis, and they took money out of the Hatch formula funds and put it into competitive grants. That hit us hard.

Senator **Leahy**. Do you feel that the small land grants have the capacity to respond quickly and effectively to local needs? Can they respond more rapidly to research initiatives in the larger schools, and can initiatives start at the smaller schools?

I am going to let you have the final word on that question, Dean Dowe, because I am going to submit the rest of the questions for the record. Can you give me a response to that last question?

Dr. **Dowe**. Yes; a very quick answer on that, Senator. I do think that the small schools can be responsive. I think they can be innovative, and I think they can initiate new programs. And I think we have, in many cases, done just those things. For example, ELFACS, the Electronic Farm Accounting System is one that was initiated by small schools in the Northeast.

We can be very responsive, so that it not a problem. The one thing that I would like to mention is I am not convinced in all cases that the size of the State is related to the increased or decreased responsiveness of the State agricultural experiment station, or the State extension service. I think that the system is the thing. We have a system in place out there where Iowa, Dean Kolmer, or Director Watts here in Colorado, they can respond almost as quickly as we can and their distances are a little farther, but they have the system in place that can respond just as quickly as we can to those things.

Do you agree with this?

Dr. **Kolmer.** Yes. I would add, too, that one of the things that hasn't been mentioned this morning are the regional centers. I think the rural development regional centers are one place where the idea of the regional centers for extension and research has really worked, and the combination in our region of the large States and the small States—and the benefit doesn't just go from large States to small States, it goes the other way, too, because of the innovation. Sometimes poverty has some virtue in terms of improved innovation, and it really does work.

Senator **Leahy.** We had very good testimony on that very point from a Dr. Morrison, president of Alabama A. & M., yesterday. He described rural development research problems from the unique perspective of the black colleges, the 1890 colleges.

I am going to have to cut off further discussion for this panel now. As I said to number of the witnesses yesterday, I wish our time schedule was such that we could spend several weeks just on this subject alone. I think it would be well worth while.

Somehow we were able to spend 3 months on the floor debating the Panama Canal Treaty, whether people were for or against it. It was something that within the first 2 weeks I expect virtually everybody in the Senate made up their mind one way or the other and had heard every argument at least twice. I tend to think that the issues we are covering right here in the long run are far, far more important to the people of the United States than the Panama Canal.

I thank you gentlemen very, very much for coming, and please feel free to add additional materials. Your full statements will be part of the record. I suspect we may be contacting you for further information after the hearing.

Dr. **Watts.** May we take some of the questions we had from the staff and reply to those?

Senator **Leahy.** Please do, and as I said, feel free to send me additional comments. They will be part of the record.

In the points you have made, I sense already some strong support among members of this subcommittee, and the whole committee. I suspect that further support can be gained by the material that you can bring in. The issues cut across all regions and States and will help all of us to understand the issues of rural development research a great deal.

Thank you.

Dr. **Dowe.** Senator, thank you.

Senator **Leahy.** Our next witnesses are Ms. Diane Fields of the Southern Rural Policy Congress, and Al Navarro, executive director of the National Rural Development and Finance Corporation.

Ms. Fields, I am delighted to have you here. I was becoming concerned that this was going to be a totally male-dominated hearing record. The strongest and best ally I have had in the Senate concerning rural issues during my 3 years here was Senator Hubert Humphrey. I now have the same kind of alliance with Senator Muriel Humphrey. I suspect that if I bring this hearing record to Senator Humphrey to tell her what we have discovered, one of the first points she will make is that the hearing list of witnesses looks very much like the lineup of the U.S. Senate. I agree with her that the Senate needs to reflect a male-female balance. The current paucity of women in these chambers shows we have a long way to go in achieving equity of representation. I am glad you were able to join us.

Ms. FIELDS. Thank you very much.

Senator LEAHY. Why don't you lead off on the testimony and then we will turn to Mr. Navarro. Your whole statement, of course, will be part of the record, but if you could summarize it for us, I will have time to ask several questions before we take a midmorning break.*

STATEMENT OF M. DIANE FIELDS, DEPUTY DIRECTOR, SOUTHERN RURAL POLICY CONGRESS

Ms. FIELDS. I am Diane Fields. I am deputy director of the Southern Rural Policy Congress, and on behalf of the Congress, let me thank you for affording us the opportunity to provide you with our thoughts on the present state of agriculture research and possibly provide you with some recommendations on how it might better serve Southern black rural committees.

Let me begin by giving you a brief historical profile of the Southern Rural Policy Congress. SRPC had its beginnings on January 7, 1977, when different individuals came together from organizations that would impact on the problems of rural communities in the South. The organization grew out of an ever-increasing awareness by practitioners of Southern rural economics and social development that individual voices had been falling on deaf ears in the legislative and executive arenas of Government.

One of SRPC's goals is the design model for comprehensive approaches to rural development in the South. Research is the key to developing that model. To date, predominantly all of the agricultural research in the South is compiled by the 1862 and 1890 land-grant institutions through the Cooperative State Research Services of the Department of Agriculture. There are approximately 130 land-grant institutions, where at least 15 hold the status of being 1890 land-grant institutions.

The 1890 institutions were originally black and remain predominantly the same at present. The working budget of the 1862 land-grant institutions is $97 million, where the 1890 institutions have a budget of only $14.5 million.

To date, there is very little published research and data on the black agriculturist in the United States. Historically, there were 3 million blacks engaged in farming, cultivating some 41,500,000 acres of land in 1909. These blacks were migrant workers, sharecroppers, tenant farmers, part- and full-time operators.

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*See p. 320 for the prepared statement of Ms. Fields.

Rural black farmers not only accounted for almost 70 percent of the total black population in 1910, but 30 percent of the total Southern rural population and 40 percent of all Southern farmers. Small farmers, whether they be black or white, are disappearing under the combined onslaught of, over, modern agricultural technology, which raises the cost of farming beyond the means of the modest farmer, and two, agricultural and tax legislation biased to favor the larger operator and the corporate operator.

Although the greater portion of blacks who have left rural America were probably not landowners, the migrants and the causes behind the migrating are believed to have contributed heavily to a decline in black land ownership. Between 1950 and 1969, the amount of black-owned farmland declined from 12 million to 5.5 million acres, a loss of more than 50 percent.

This decline continues at this very moment when heavy industrial growth in the South is being projected, when some significant political and economic gains for Southern blacks are emerging and when once again, agriculture has been made a promising industry even for the more modest farmer by the threat of a world food shortage.

There has been no detectable research by the Department of Agriculture to aid the farmer in alleviating the problems of land retention. Even in the area of technical skill research where a farmer's crops could determine his very existence, is there any technical data. Most agriculture research is not geared toward the small farmer, whether he be black or white. It supplies data to the larger or corporate farmer where the importance rests on major commercial agri-business.

Invaluable research disseminated on facilities and equipment that could enhance the production on a farm cannot be utilized by the small farmer because again, it is geared toward the larger or the corporate farmer.

The Southern Rural Policy Congress is very supportive of agriculture research. It is undeniably a very important part of the Department of Agriculture and farmers in general, but if the Department is directing its research interests toward corporate farming, the small farmer will invariably become nonexistent. SRPC feels that a redirection in priorities is imperative by the Department of Agriculture in its thrust on State land-grant research.

Our recommendations are: One, the Department should analyze the trends inhibiting the viability of the small farm; two, improve marketing systems and outlets; three, provide better farm machinery models geared toward the small farmer; four, research innovative models for small farm training curriculum, programs and institutions; five, legal research on inheritance tax problems for black landowners in the South.

After a study of the present research areas of the Department of Agriculture, SRPC is of the opinion that more research grants should be awarded on a competitive grant basis to nonprofit community organizations, agencies of the State and local government, and universities other than land grant. There is also the necessity for a more equitable appropriation to the 1890 land-grant institutions.

If States refuse to comply, then Federal funds should be withheld. Finally, there should be mandatory representation by both consumer activists and small minority farmers on land-grant institution advisory boards, having input on overall policy and program evaluation, and ongoing monitoring of research priorities. Those are our comments.

Senator LEAHY. Thank you.

I find some of your comments parellel those made by Dr. Morrison, the president of Alabama A. & M. University yesterday.

Do you feel that the USDA research activities have not been adequately representative of low-income people and minority groups in rural America?

Ms. FIELDS. Yes.

Senator LEAHY. Do you see any change in that trend? Or do you see that as a pretty solid trend requiring further emphasis by the Congress?

Ms. FIELDS. Let me say this first, that in November the Southern Rural Policy Congress met with Secretary Bergland, who vowed that numerous changes would be made throughout the agency in a number of areas; in rural development, Farmers Home, land-grant institutions, and the amount of money that is given.

To date, in the area of agricultural research we really have not seen any change whatsoever. I tend to feel that legislative changes might have to be put into effect, or some review by Congress, by you and the committee on what changes can be made. It is very obvious that there is not an equitable share in the distribution of appropriations dollars between the 1862 colleges and the 1890 colleges.

The 1862 colleges have more extensive programs than the 1890's, but I am sure that is something that can be changed and there can be more responsibilities given to the 1890 institutions, just as there have been the 1862.

Senator LEAHY. Did Secretary Bergland or his office, give you any breakdown of what these specific changes are? Or is it more of a general statement of intent that changes would be made?

Ms. FIELDS. Let me say that we submitted a position paper to Secretary Bergland, and we cited certain problems. We talked about the Farmers Home Administration problem. We talked about the accountability by the State and county representatives of Farmers Home Administration with local people, county people, State people. We talked again about the agricultural research. We spoke about the whole rural development area, with the Department having more accountability on the whole to agriculturists in general. Those were the kinds of things we talked about, and there was an agreement, first of all, that all those things needed to be done and that we were going to move or assist them in bringing about some changes.

Senator LEAHY. Could you send me a copy of the position paper and we will make that part of our record here?

Ms. FIELDS. Certainly.

Senator LEAHY. Mr. Navarro, we are glad to have you here. Could you summarize for us your statement? The full copy will be part of the record, and I have a number of questions I would like to direct to you.

STATEMENT OF AL NAVARRO, EXECUTIVE DIRECTOR, NATIONAL RURAL DEVELOPMENT AND FINANCE CORPORATION

Mr. NAVARRO. Thank you.

I ~~too~~ thank you for asking and allowing us to participate in these hearings.

I will read my statement and also make some verbal comments.

Mr. Chairman and distinguished members of the subcommittee, I appreciate the invitation to be here today to make a statement on nonfarm research and development on behalf of the coalition of rural community based organizations across the Nation that constitute the National Rural Development Finance Corp.

The NRDFC is a nonprofit corporation established to address the problems of the rural poor using the techniques of community based economic development. Under a program grant of the Office of Economic Development of the Community Services Administration, NRDFC is combining the input of users and development practitioners to develop an effective mechanism for the delivery of development assistance, capital and other resources that would provide economic opportunities for low income rural people.

It is also anticipated that NRDFC will be a vehicle for the development of a comprehensive national policy for rural economic development. The NRDFC board members represent diverse geographic areas and ethnic groups, including blacks, mountain whites, Chicanos, Puerto Ricans, native Americans and other rural low resource ruled Americans.

As currently constituted, NRDFC component groups serve roughly 5 million of these people through vehicles, including Community Development Corporations, CDC's, cooperatives, and other economic development entities. This diverse group gives NRDFC the potential to be an advocate of imaginative rural community based economic development strategies.

After several lengthy meetings, the NRDFC board has identified five major long-term objectives and strategies to be accomplished. They are, development and implementation of exemplary action projects for maximum impact on the rural poor; development of rural financial institutions to provide special financial arrangements for community based rural development; development of a comprehensive policy research and analysis component to make projects appropriate to the area of the constituents served; cooperation with government and special joint projects designed for increasing rural development capabilities; and encouragement of increased participation of community groups and organizations in rural development.

These objectives are action oriented and encourage maximum coordination between the public and private sectors for that implementation. The strategy we are formulating will focus on several strategic community resources and have direct impact on low-income communities.

Through its constituent organizations, NRDFC is developing a process and a plan for the establishment of a comprehensive development program for disadvantaged and low-income people in rural America. The operational plan presented here is a result of several interactive factors and forces.

1. There is no coherent policy for comprehensive development for poor people in rural America. There is a lack of funding commitment to support existing legislative initiatives for rural development. The practitioner groups in rural community development have expressed their desire for, and have taken the initiative to establish a more comprehensive national rural development effort.

The special capabilities and the willingness to take risks displayed by community economic development groups serve as the catalyzing agent for the creation of a more comprehensive national rural development policy and program, and also that Federal rural development programs have failed to reach many of the more severe cases of disadvantaged areas of low-income people, build the capacity for local self-management needed in implementing developmental efforts, respond to the diverse needs of rural communities and to leverage private and State and local resources, adequately support and integrate human resource development and activities with physical development activities, develop supportive systems that would enable low-income people to participate in the economic sector of rural America, and allow for participation in policy formulation by rural people and community groups.

If the deplorable situation I have just outlined is remedied the research and development resources of Government must be open to the nonprofit community based development organizations that represent the millions of low-resource people across our Nation.

The university-industry-USDA triangle must be opened up. Community-based input and direction available through competent community organizations must be brought directly to bear on the economic, social, and educational problems of America.

The NRDFC recommends the following areas of research, development, and demonstration to you.

A. The launching of decentralized small scale economic ventures in rural America. When I say small scale, I am drawing a distinction between the scale of enterprise that a community or communities can make a success of and that which is traditionally imposed upon them by outside large-scale industrialists, a model which siphons the profits and resources out of the community when they are made.

B. Natural resource identification and opportunity analysis for rural development. A salient question is whether agriculture is right for the creation of jobs, and if so, where and how. Here we are talking about a horizontal scale, not a vertical scale, of corporate interests.

C. A crucial preceding element for successful community based economic development will be the development of alternative training and management systems for small business persons, small farmers, and small-scale industries.

D. Technology assessment for small scale decentralized economic development is a crucial counterpart to a strategy for natural resource development and community economic development.

E. There is much more to be done in improving and disseminating information on cooperative systems and cooperative development. Sad to say, there is a plethora of precious Government resources being expended on corporate management techniques and on corporate development but nothing even approaching an equivalent basis in the cooperative area. This is an area perhaps where we might have some more dialog on later on, an area which has the virtue of keeping profits within the community, thus creating rural economic growth and security in that community.

Senator **Leahy**. You spoke of the low resource rural people. Do you see evidence of research attention from the USDA and the land grants to the credit needs—take that first—of rural people?

Mr. **Navarro**. First of all, let me say that I think in the last 10 years there has been some shift on the part of the—I'll use the word "established" research systems. I think that recognition that perhaps decentralized and small-scale systems have been overlooked. I am not saying that there is a total ignorance of that change in trends, or the need to reassess that, but I will say that in terms of the actual projects that have been initiated, that kind of change, and that kind of reversal, redirection of those resources is going to have to take a specific action-oriented approach.

Senator **Leahy**. Lets follow up on that as it pertains to land grants and USDA. Is there any evidence of activity, for example, in support of small businesses within the community? Are you talking about keeping money within the communities, keeping the circulation of funds in rural areas? Do you see the land grants doing that?

Mr. **Navarro**. Let me give you one example of an effort that was made under title V of USDA in California, which is what I have the most experience with.

When title V came out several planning sessions took place at the U.C. land-grant system. We, as community development groups, made a deliberate effort to get involved and, in fact, spent a considerable amount of energy and time in structuring ourselves to be involved in those kinds of projects, and the title V project was a new program so we took that on as an effort.

And California received so much of the title V. It was substantial. It was several hundred thousand dollars eventually that went into that State because of the population size and so forth. Half of the project was spent on looking at extension services and how it could be redirected to assist small minority farmers in California and emerging low-income cooperatives, which is a phenomenon that is presently in the process in California.

And, second, how better a research project was done on the other half, what were some of the needs of small farmers and low-income farmers and what could be done to help cooperative systems.

Two people were hired, two minority, Spanish-speaking people were hired on the extension service, and this is a footnote to that. In California, Salinas Valley, San Joaquin Valley and the Imperial Valley are the major agricultural service areas of the land-grant system.

The population base of those valleys, in terms of rural communities, is over 30 to 40 percent, and sometimes higher in some areas, Mexican-American low-income farmworkers, and yet, these two people that were brought in under title V in the extension service were one of the first two Spanish-speaking field people that all of the land-grant system in the State had. I think that is another area that has to be looked at.

Senator LEAHY. I think that goes into some of the question I asked Ms. Fields—how receptive are USDA research activities to needs of low income and minority groups in rural America?

Mr. NAVARRO. There hasn't been very much. In fact, there hasn't been any in the last few years and token efforts have been made. I am categorizing the title V effort as a sincere effort on the part of the university, but with token results.

When the project was terminated, by the way, the two people that were hired for the extension service were going to be terminated and so we put a considerable amount of pressure on to hire them on a permanent basis. That still hasn't been accomplished yet.

The land-grant system, in my opinion, in order to redirect its resources, is going to have to be either pressures with more specific action projects, or a competitive system is going to have to be established, and last, an alternative research and development capability is going to have to be looked at if we are going to meet those needs.

Senator LEAHY. Let me ask you now about the alternatives. Are there other institutions that are not presently being funded in rural America which can provide the research and technical assistance to rural people and communities? When we talk about alternatives, is there something already in place that could provide an alternative, assuming that we are not able to get the mechanisms that are there to be responsive?

Mr. NAVARRO. The U.S. Government has spent considerable amounts of funds since the "war on poverty" in the Kennedy-Johnson programs, on capacity building and capacity development in low-income communities in this country and in rural areas also.

There are several program areas that a lot of leadership has come from. In fact, I can point out several people in the Congress that involve their leadership from these groups; community action agencies, community development corporations—two or three Under Secretaries of the administration were formerly directors of CDC's, and I was.

In the area of rural housing and community development in water projects, nonprofit organizations who have the capability of implementing projects but also have the capability of analyzing policy. The biggest weakness that these systems have, these nonprofit systems and trade associations and so forth, is the support to develop the capacity to be able to compete in a competent manner on research and policy analysis projects.

I think we have the base and we have the institutional framework. We have the community and the kind of broad representation that is needed in the systems.

Senator LEAHY. They have just got to utilize it.

Mr. NAVARRO. Exactly, but we don't necessarily have access to the funds to implement them. It is an area where I think that if you are going to redirect the policy you are going to have to look at the structures that are going to implement these R. & D. activities.

Senator LEAHY. How do you feel about that statement, Ms. Fields?

Ms. FIELDS. I feel that there can be an additional thrust by organizations, small organizations, nongovernmental, that are already in place locally to also do some of that research. I understand, from a minority perspective, that for years the 1862's were not really addressing themselves to research that would be geared to the rural community residents, which means that that small nonprofit community organization had to get out there and do the research with their own capabilities and on their own level in order to show statistics in the area necessary to provide input or information to others on that level.

So, I think there ought to be an added thrust, an addition of some kind of funding mechanism in agriculture for those organizations that can also provide research on their levels, or even money there to assist them in expanding their research capabilities.

Senator **Leahy**. This is an area where the 1890 colleges also could do a great deal.

Ms. **Fields**. Of course.

Mr. **Navarro**. I think there is one more point on that, if I could add to it. In the area of community development and, we will say, in the area of rural development—and we would essentially emphasize that low income, economic, housing, and social and physical amenities, is what we define as rural development impacts, and the abilities to stabilize economies for full participation by those community residents—in that area, I happen to think that one of the problems with the existing research system is that there is not a capability on the other side—the institutional side, the established side—to do an adequate job of research, just as perhaps in the community development the community groups do not necessarily have the research capability.

I think it is going to be a combination of redirecting the established institutions, increasing the skills and capacities of the community-based organizations and the alternative systems, and if possible, working in the cooperative fashion.

The last area, of course, is that the way the existing system right now takes on much of the projects, it is a combination of both State payments and private support as matching grants in order to attract and compete with the research dollars that are issued. That goes back to whether or not there is going to be a policy of supporting, target it, and possibly some demonstration, or possibly some special targeted research and development activities, and if necessary, funding them at 100 percent and not necessarily doing it in the same system as we have now, until we get such capability and such incentives, we will say, to start redirecting some private resources and other resources.

Senator **Leahy**. Thank you. I am going to put the rest of your statement in the record. We will break at this point for 5 minutes because we are running behind schedule. I am aware that we are going into session at 10 o'clock and I am afraid we might get called out for votes.

You both raise issues that were raised in somewhat different context by Dr. Morrison yesterday, and it is an area that concerns me greatly. It is not something applicable to a State as small and homogeneous as Vermont. But it is applicable in many other parts of the country such as the South, large parts of the massive agricultural areas of California, and so forth. With that in mind, I would hope you would not mind if we submit followup questions for both of you to respond to for the record.

And, also, if either one of you, based on any of the testimony of yesterday's hearing and today's hearing, want to add further points, or take issue with any points, amplify any points, our hearing record will be kept open for 1 week to 10 days so that you can do that. Thank you.

Mr. NAVARRO. Thank you very much for giving us this opportunity.

Senator LEAHY. Thank you very much, both of you.

We will recess for 5 minutes.

[A recess was taken.]

Senator LEAHY. Our next panel includes Carl Spangler, Gerald Doeksen, Peter Gore, William French, Bart Russell, and William Heffernan. I wonder if maybe three of you could come down on this side and three of you come down on this side and we can get all of you in here. And then, if we can get your names down in order it will make it easier for the reporter. We will start with Mr. Spangler.

STATEMENTS OF A PANEL CONSISTING OF: CARL SPANGLER, COMMISSIONER, HOUSING AND COMMUNITY DEVELOPMENT, STATE OF VERMONT, MONTPELIER, VT.; DR. GERALD DOEKSEN, COOPERATIVE EXTENSION SERVICE, OKLAHOMA STATE UNIVERSITY, STILLWATER, OKLA.; DR. PETER GORE, DIRECTOR, INSTITUTE FOR MAN AND HIS ENVIRONMENT, CHAZY, N.Y.; WILLIAM FRENCH, DIRECTOR, SELF HELP ENTERPRISES, VESALIA, CALIF.; BART RUSSELL, EXECUTIVE DIRECTOR, NATIONAL ASSOCIATION OF TOWNS AND TOWNSHIPS; AND WILLIAM HEFFERNAN, ASSOCIATE PROFESSOR, DEPARTMENT OF RURAL SOCIOLOGY, UNIVERSITY OF MISSOURI

Mr. SPANGLER. Carl Spangler, representing the Vermont Department of Housing and Community Affairs.

Mr. FRENCH. William French, representing Self Help Enterprises, California.

Mr. HEFFERNAN. William Heffernan, University of Missouri.

Dr. DOEKSEN. Gerald Doeksen, research and extension, representing Oklahoma State University.*

Dr. GORE. Peter Gore, State University of New York and Cornell University, working with title V.*

Mr. RUSSELL. Bart Russell, National Association of Towns and Townships.*

Senator LEAHY. Dr. Doeksen, I apologize for mispronouncing your name, but it is probably not the first time that it has happened.

Gentlemen, I know that some of you have prepared statements which are part of the record and some of you are going to be working from notes. I would like to start off immediately if we could, because I am somewhat worried about the situation on the floor. You will hear a loud buzz in about 3 minutes which will be the Senate going into session. I am concerned about some legislation that may be coming up and requiring votes prior to 11, so what I would like to do is start first with the questions in case we have to halt this hearing in any way. Then if time permits we can go back to statements. The prepared statements will be part of the record and we will also make sure that each one of you is given time today to either state for the record or to add additional comments subsequently for the record.

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*See p. 321 for the prepared statement of Dr. Doeksen, p. 333 for the prepared statement of Dr. Gore, and p. 347 for the prepared statement of Mr. Russell.

Let me start off with just one basic question for each one of you. As one can tell by looking at your titles and areas of expertise, we have achieved a broad topical and geographical variety of witnesses for this panel. From your individual perspectives, what has been the nature of the land-grant college response to your research needs? Feel free to define what you see as your research needs. And do you feel as though your own constituency's priorities are represented in the priority sitting process?

Mr. Spangler, we give you the chance to start off. Let me repeat the question again. From your individual perspectives, what has been the nature of the land-grant college response to your research needs? And do you feel as though your priorities are represented in the priority setting process?

Mr. Spangler.

Mr. SPANGLER. Thank you, Mr. Chairman.

I believe I can start out by saying that what we view as being the rural research needs, the nonfarm research needs, of Vermont, and the sense that I get from other DCA's across the country is not really the same definition as used by the extension service or by the land-grant system.

We have defined community development in its very broadest terms. It is not just housing. It is not just transportation. It is not just economic development. It is all of those things and more. It has been our experience at least in Vermont, that the land-grant system has not defined rural community development in those terms. It is still somewhat narrowly defined, and we are looking for a partnership really with the land-grant systems, with the extension service to more broadly define community development.

We have started this in a number of ways. We have started to work with the extension service on UVM. So, generally, I would say from our point of view, and I bring the perspective of Pennsylvania and Vermont to the table, the issue of rural community development needs to be more broadly defined, and the research needs to be more broadly oriented than in the past.

Our priorities—I don't believe we have any one priority other than that the issue be defined in its broadest terms and that the nonfarm issues, once again I guess, receive some targeting by the land-grant systems.

Senator LEAHY. Do you see within the USDA-land-grant framework a capacity to recognize or work on those other priorities? In other words, is it a matter of requiring significant changes in the legislation as you see it, or rather, a case of the administration of the land-grant colleges using their own discretion to recognize additional priorities?

Mr. SPANGLER. I believe it is the latter, and let me draw a parallel. Recently, Gordon Cavanaugh has made a significant change in the Farmers Home Administration, at least in the State office. The State offices around the country now recognize community development. They don't just talk about community facilities and services or farm problems or farm credit problems. They are now talking about community development in its broadest terms. That is a great change and I hope it filters down to the county level.

That is the kind of change, the change in attitude, orientation and direction that I am referring, not necessarily a change in legislation, and certainly not a change that would require new programs because I think what we need to do is forge a partnership, as I referred to previously, at the Federal level between the various—Economic Development Administration, HUD, Farmers Home, at the State level between the universities, between the departments of community affairs of which there are 45 around the country and at the local level.

I think it is that partnership that is needed, not more programs.

Senator LEAHY. Thank you.

Mr. French?

Mr. FRENCH. Senator Leahy, the answer to the question from my perspective as a rural practitioner in community development is a clear and definite "No." Also, my response from my participation in a project in California called the small farm viability planning project in which I was the chairman of the community development task force, which looked at issues related to community development and how it relates to the development of the farm and the quality of life in rural areas.

The answer from that is a clear and definitive "No." The agricultural educational establishment, of which the Agriculture Extension System is part, does not reflect the needs, the constituency, or the issues of rural community development and of rural people other than a very narrow group of large agricultural interests.

Senator LEAHY. Thank you. That is pretty succinct. I appreciate it.

Mr. Heffernan?

Mr. HEFFERNAN. I agree that it is not, but the system could provide more support for research focusing on rural people even as it is currently constituted. Since it is not, the system obviously needs prodding.

The research funds are currently going heavily toward the farm productive sector. We need to look further at the social economic results of that funding. What are some of the consequences of this productive type agriculture research for rural communities?

In the last couple of years, I have had access to title V funds and found them very beneficial. But as you know, those funds are in jeopardy at this time and they were never too great at the outset.

Senator LEAHY. They never even approached the authorized level.

Mr. HEFFERNAN. The competitive grant system has focused on four areas and basically provides no support for researchers like myself. Other than nutrition, the four areas provide no support for research focusing on rural development.

Senator LEAHY. Would your best vehicle be title V if adequately funded?

Mr. HEFFERNAN. Title V is the best program we have to date.

Senator LEAHY. Mr. Russell.

Mr. RUSSELL. Chairman Leahy, the National Ascociation of Towns and Townships has not had an opportunity for the most part to work directly with land-grant universities. Our primary focus is on Federal policymaking as it relates to small towns and urban areas.

We are a federation of State organizations and in some States, Pennsylvania, New York, and others, we have heard reports that they work well, that the associations get good support in isolated instances from some of the land-grant universities. But those are just that, isolated instances.

We believe that—and I think everybody in this room would agree—there is an urban dominance of Federal policymaking here in Washington. To counteract this inequity, we believe that the resources of the land-grant universities as well as the Economic Research Service and other agencies within USDA doing research ought to be centralized to provide support to USDA in its efforts to provide a voice for small towns at the Federal level. So, when it comes time to do things, such as develop an urban policy, the Department can have some real significant data to show what affect the urban policy will have on small towns and rural areas.

NATaT representatives had a meeting with Mr. Eizenstat 3 weeks ago, just prior to the announcement of the urban policy, and we were very dismayed by some of the implications of the proposals that came out of the urban policy. We were equally dismayed by the lack of marshaling of Federal resources that was contemplated through the rural policy. We think nonmetropolitan communities need the same level of marshaling of Federal resources, Federal commitment as was provided for the development of the urban policy, only done in a different way. We all know some the failures that came out of the urban and regional policy task force, and it would be counterproductive to take the same approach to a rural policy. Nevertheless, the situation in rural areas demands the major attention of our national leaders.

To get back to your previous question, Mr. Chairman, if I had one major point to make with respect to USDA/small community research. I believe that there needs to be a significantly higher level of funding for it. I believe that if Alex Mercure and Secretary Bergland are going to implement section 603, they will need a centralized data base and an informational retrieval system similar to what HUD has. HUD has formed a partnership with the big city mayors, and has within its bailiwick a very strong policy and research development division, which is well funded and which contracts with groups such as the U.S. Conference of Mayors and——

Senator LEAHY. But heavily urban oriented.

Mr. RUSSELL. Heavily urban oriented. We believe that in order to at least provide equity and balance, USDA needs to forge a similar partnership with local officials. It also needs to establish a policy resource center like HUD has to look at the special characteristics and needs of small towns so that when Federal policy is developed the Department will be able to provide the nonmetro perspective. This will help insure that the interests of small communities are at least given fair treatment.

Senator LEAHY. One of the things that prompted these hearings is the fact that I also serve on the Appropriations Committee. Here I constantly see appropriations for various programs, whether they are housing programs, transportation programs, health programs, or anything else, going through that committee.

It is my reaction to these appropriations that they are heavily urban oriented. There is an urban bias in many, many programs out of

Washington. And yet, to try to demonstrate that is almost impossible because, as you say, the research is only available on urban matters. It has gotten the media attention. It has gotten congressional attention. And it has gotten the administration's attention. Attention is gained for a number of reasons, not the least of which are political.

The news media can find ways to look at a large city, in part, because it may have a large viewing population there, but cities are also accessible. To look at the problems of 1 million or 2 million people scattered over 20, 30, 40, 100, or 200 towns and villages is much more difficult. So nobody bothers.

Having witnessed the urban bias, I decided to hold these hearings to try to jar the administration—the appropriate agencies—into developing a better research base. And also, to direct the programs that we do have in the area of rural development, however defined, to direct that program attention to the things that rural people really need.

If it is true, as was presented yesterday by the administration, that there is a 2-to-1 ratio in population growth in rural contrasted with urban growth rates, then we have been extremely neglectful in this country in introducing that fact into the planning and legislative processes.

Let me go to Dr. Gore.

Dr. GORE. Just to follow up on what you were saying about the turnaround in terms of migrations to the cities, which brings more concern for quality of life to rural areas, more concerns about equity for rural people, not just the ones who have recently migrated, but the ones who have lived there all along who have seen services in small towns decline.

There is a kind of middle-class taxpayer revolt that is going on. I guess there is a referendum in California about that right now.

Senator LEAHY. Everybody is watching that referendum with a great deal of interest.

Dr. GORE. Since there are no increasing amounts of money to provide services to people, and we need to find new ways to make old services better distributed. And in my case, it has been the title V use of funds that has made this possible, to look at some new ways of getting services out to people, and I would suggest that because of the title V some innovative things have happened in research and extension activities, and it should be continued.

If there were any difficulties or areas that could receive some more attention, it would be in the quality of the State systems in picking up on some of these new areas. Let's get them disseminated throughout the regions and acted upon beyond just the research area, so that action programs are carried out, over a broad area.

Senator LEAHY. In your view is the primary problem, with title V, its lack of funding?

Dr. GORE. Lack of funding and perhaps lack of consolidated direction of the administrators that are handling the thing.

Senator LEAHY. Dr. Doeksen?

Dr. DOEKSEN. I too am a practitioner. My appointment now is a researcher and extension person; so my comments will reflect these experiences. My research has been very applied, as I work with local decisionmakers on the problems they face, and in extending these results to other governmental units with similar problems. This approach has been very popular with governmental units in Oklahoma. For example, if a private ambulance operator discontinues service, the community has to take over the service. What are the alternatives? What are the costs and receipts?

This research and extension activity has been very popular. We have worked with many governmental units on many community service problems. Due to the fact that this has occurred, I have received good support from my administrators. Thus, I have to differ from the others on this panel. I would like to receive more but I realize the situation thoroughly in that my administrators have a limited budget and they have to allocate it as efficiently as possible. I would like to receive more. I do think we need more funds in the area. As an example of requests for assistance, in the last 3 weeks I have received 18 requests to work directly with leaders of communities on problems which they consider crisis. Many have to make a decision in 30 days. For example, the leaders in the community of Seminole were told by the private ambulance operator that he was going to discontinue service June 1. Local leaders must decide in a short time period how they are going to provide the service.

This is an example of the types of research and extension requests that I am receiving. I do think that as nonmetropolitan areas continue to grow that we are going to have an increasing number of requests We are not going to have enough resources in the area of community and rural development unless more resources are made available.

Mr. HEFFERNAN. Could I add something?

Senator LEAHY. Sure.

Mr. HEFFERNAN. I see two major types of rural development research, and they are really quite different. One type is very problem and locality specific and provides community leaders with information they need to make decisions about their individual communities. Title V has shown us a very good example of one way this might be done.

The other type of research explores alternatives from the national policy standpoint. I have received very limited Hatch funds, for this latter type. We need both types, and we need to keep in mind that while information for the types of decisions the communities make may eventually be cumulative and, thus, provide information for judging alternatives, this is not its function. We need additional support outside title V such as competitive grants to support this type of research.

Senator LEAHY. Let me ask you a question on that. As researchers you have got to look at what prompts adequate research. What reward criteria do you suggest as a means to promote research more attuned to rural needs?

Mr. HEFFERNAN. That is a tough question

Part of the answer has to do with monetary rewards and the source of research funds. Although there are problems within our professional associations and within our own campuses concerning the basis of status and prestige, adequate, long-term research funding can redirect efforts. I grant that research oriented toward helping local communities solve their problems usually does not get articles in professional journals.

Senator LEAHY. One of the problems we heard yesterday, dealt with whether academic oriented research is more prosaic than the kind of research you do for local people. And yet, it is absolutely essential when you are talking about, for example, what to do to make sure that we have an ambulance service available. What are the things that will make sure that, if a housing project is planned for a rural community, local impact is adequately anticipated? How do we guarantee that research on this type of human and organizational need is probably not going to end up in a scholarly journal; it is probably not going to be the thing that guarantees a professor tenure; but it might be a heck of a lot more important to all of rural America than the paper that does get tenure. Such work well might be very scholarly but of limited application. How do we reward these people?

It came through time and time again in the testimony yesterday, that many times the rewards—and priorities leading to such rewards—aren't there and we can't rely on rural altruism as a solution for want of a better term.

Mr. HEFFERNAN. A researcher needs funds, and funds are not always easy to acquire, especially in some of the areas that we are talking about right now. Researchers need financial resources and are often able to combine both types of research. In fact, I have had a little success in this regard with some of the title V money. I was able to obtain problem specific data needed for the community while also obtaining data addressing more academic types of issues—I shouldn't say academic, but some of the more basic alternative issues that might have application beyond just the single community.

I guess I am saying that I don't think you can do much per se with the whole prestige factor directly, but the supporting of particular types of research is an indirect means of changing the reward structure.

Senator LEAHY. And we haven't done that in title V.

Does anybody else want to try that one?

Mr. FRENCH. One thing would be to not rely on that system at all. I don't think that perhaps we can worry about changing that university system which is so tied into the type of reward systems that they have. Maybe one of the things to do is to fund other types of researchers and not worry about how to reward researchers who are already there.

That was one of the things that was very upsetting to me yesterday in Dr. Cutler's testimony. I was sitting in the back getting very anxious.

Senator LEAHY. I saw you there. I figured we would hear from you today on that.

Mr. FRENCH. When he mentioned that the reason he didn't fund title V was because he wanted to continue to support the existing establishment, yet it is clear from all the testimony that we have heard in these 2 days that it is title V which has been breaking loose that iceberg which he referred to as title V being the tip of. But, that has broken it loose. TitleV has started to break loose the establishment in California. It started to.

You heard what Mr. Navarro said. But, with title V gone, that university system is going to just go back in its shell, so I think one of the things to do is not worry about that system. Find a way to fund other types of researchers. There are other types of researchers out there besides that university system which has those built-in reward systems which I don't think that we can worry about trying to change. That is an awful ingrained bureaucracy and system that I think would be very difficult to change and would take too much energy to try to change. We have energy that needs to go in other things besides trying to change that.

Mr. RUSSELL. Mr. Chairman, I rarely have much positive to say about the part of Housing and Urban Development, in terms of the assistance the Department provides to townships and rural areas. In fact, during a briefing just prior to the announcement of the President's urban policy, Secretary Harris and I had a bit of a one-to-one about the question of impact on small towns and rural areas.

One thing I think HUD does well is support the work of our large metropolitan centers, and USDA could take on a similar role for small towns. First, it would need the money to start such an effort, which is something that the Department doesn't have. But, assuming that Ag finds a way to get the resources, I think it could take a page out of the chapter that HUD has written in terms of working with universities and big city officials.

One recent grant that HUD made through its policy and research development wing was to the conference of mayors, as I said, for $250,000 a year for 3 years. It is called the urban observatories program, and the Department chose 10 cities, linked them with 10 universities and then developed a research agenda by involving local officials. I don't see why we couldn't do something similar with the Department of Agriculture, as I said, based on the premise that there is money to do the same thing.

And look to see how HUD does it because Mr. Eizenstat and his staff invariably go to HUD for urban data based on such research. In this vein, I would like Mr. Eizenstat, when he is talking about small town and rural area policy which is quietly being developed right now, have the access to the same type of information at USDA because this Department is the primary entry point for small town officials at the Federal Government level. If we could have the title V research results and all the other sources of nonmetro information—Economic Research Service work, for example—available in one central location, it seems to me that it could be put to very good use by both the White House and the Congress.

But, in terms of providing incentives at the local level for researchers I don't see why we can't do it in a way that is similar to how HUD has done it with university researchers.

Senator LEAHY. Speaking of incentives, in Congress sometimes the incentives to work on a particular problem are often directly released to a parochial interest.

I use the Chair's perogative and turn to Mr. Spangler and ask his sentiments on this issue.

Mr. SPANGLER. Would you restate that? I was working on a response to the previous comment.

Senator LEAHY. Go ahead and respond to that question. Again, I am curious, what reward criteria do we have as a vehicle to promote research?

Mr. SPANGLER. It is sort of related. I am not sure whether there is a reward vehicle but I would like to second the previous comment that there are alternatives, alternative organizations or structures for having this research done, and granted, I come with a very biased point of view. But I see right now departments of community affairs around the country doing an awful lot of applied research. They are doing exactly what you are doing with the ambulance service. They are doing that with water systems, and with emergency communications, and so on, but on a brushfire kind of basis, no long-term solutions but day-to-day problem-solving activities.

I think that perhaps USDA could not in-house create a think tank but look to other forms of State government organizations, or nonprofit, or the public interest groups to do some of this research for them.

Strangely enough, it has been the HUD 701 program over the past few years, the program that is on the down side this time of year, that has probably given the most research to rural America in the most organizational capacity to rural America, access of Federal system and to do planning and decisionmaking for their own destinies than anything that I am really aware of in USDA, and that came out of HUD. It is probably one of the most important capacity building programs that we have going for rural America, and it has resulted in an awful lot of research. That I would like to make part of this record.

Senator LEAHY. I am glad to hear that. I will be meeting with Mrs. Harris next week and I am glad to have this information before that meeting.

Yes, go ahead.

Dr. DOEKSEN. I would like to react to the comment concerning USDA research. The applied research that I conducted was completed when I worked for the Economics, Statistics, and Cooperative Service, USDA. I led a pilot project which conducted applied research on problems facing local decisionmakers. The pilot study area was in western Oklahoma and researched problems such as ambulance, fire, law enforcement, clinics, hospitals, industrial sites and apartments. In all cases, local decisionmakers identified the need for assistance through the extension and substate personnel.

I would also like to react to your earlier question about the reward system. Of course, the monetary rewards are important. But as a practitioner I receive a lot of satisfaction by knowing that I have helped the community, or knowing that I have offered them information from which they can more intelligently make a decision.

Also, by helping these communities and continuing doing a top-notch job, the word gets back to my extension director and my research director. I think we have got to continue to do a top-notch job, if we do, our administrators will hear about it and we will be properly rewarded.

Senator LEAHY. Dr. Gore, let me ask you a question. It is a fairly long question and after I read down through it I will give you the written question. What kinds of information dissemination techniques have you developed as part of your field work in rural areas? Please elaborate for us the problems of construction of these materials and how rural people responded to them. Can you get it published to further your own academic and professional career? Is it considered research, and do any other counties have this information?

Dr. GORE. Maybe the best way to answer that would be to go through some of the information and see how it could be useful in a local situation.

This was part of a title V project in service access. How can you provide better service delivery in local communities.

Senator LEAHY. Incidentally, I would note for the record at this point that Dr. GORE is showing some view slides. I would ask the staff afterward to make available to the reporter copies of the slides so that they can be put in the record at appropriate places.

Please go ahead, Doctor.

Dr. GORE. This is Clinton County, which was the pilot county in New York State for title V rural development funds; service access, housing, and employment opportunities were major project areas. In service access we felt that we needed not just to dig out the census data on what was the situation in each place but to do some of our own investigations. But, most of all, make the data comprehensible to local decisionmakers.

We began by taking some census trends to show where population was growing, and immediately people began to see, yes, we have some distinct problems of population growth around the noncentral city, and some declines out here. Local people then have to be concerned with how to keep providing services although the population is declining.

You can look at numbers of people. You can also look at characteristics of the population. So, something we looked at was where are the youth in the county located, and where are the services that people are providing various agencies, where are they putting their programs? In this case, it is 4-H, which is an extension activity. They are not fully covering the county. There may be some localized reasons, but this is a nonbiased, data based way of looking at where the need is and how are agencies responding.

Similarly, you can look at an older age category. In this case we looked at where is the greatest need for a senior citizen housing project. Immediately it became apparent the largest proportion, both in absolute numbers and by percentage, was in that township and——

Senator LEAHY. Which township was that?

Dr. GORE. This is in the upper corner, Champlain Township, and now they have broken ground for a senior citizen housing project.

Senator LEAHY. But prior to your research there had not been plans?

Dr. GORE. This had not been identified as the major place where a project would need to take place.

Another thing that we looked at was rural transportation. This took the form of examining the census records and then doing some local interviews to find out where people were commuting to work, and we found by adding up the numbers of people going to particular destinations and the mileage that they go that there was $47,000 equivalent, at 15 cents a mile, one person per car—not much car pooling—spent every day commuting to work. Using this as a basis, we have now proposed and are continuing to work on a feasibility study for a rural transportation network which would combine the commutation, take workers to work, then, when the vehicle was not used for the commutation purpose, using it for human service transportation, which the agencies are all now doing individually. We are going to try to see if there can be consolidation of this, use the commutation steady income as a base for operating the service and then getting increments of money from the human service agencies as their transportation needs are met.

One final area that was kind of interesting in terms of rural equity is in information, and that often comes from the telephone. In this particular county—and it is not unlike many rural counties—there are several telephone companies. In this county there are four phone companies, and the charge, of course, for making a long-distance call goes up as you get farther away from this central city where most of the services are located.

We did a survey to find out if, in fact, this toll charge inhibited people's use of the phone to get to social services, and it was interesting to note that the percentage of persons who called the city less than once a month for social services almost directly paralleled the montary cost, so that a higher percent of people do not use the phone when the cost goes up.

This has also been the subject of a continuing rural development, but now applied extension action project to try to create a telephone hot line so that referral could be made to the appropriate agency when some need came in from the local area.

Another aspect that we have looked at is medical services. In this particular county it turns out that when you want to go to the hospital "all roads lead to Rome," only all the roads are not very good. And this means you are out here that is difficult to get into the hospital emergency room or whatever. So, we developed a further kind of prescriptive tool which diagnosed the areas of greatest need for putting in a local health clinic, and on the basis of this there is now a clinic located in this "four corners" area that is going to take care of the access to a clinic for this corner.

This isn't anything magical. It isn't something that is brand new, but it is a way of bringing data to the practitioners and helping them understand what the local situation is, and also providing a nonbiased data base so that the politicians can make some decisions, not just on the basis of how much pressure there is from this township, or this township, or this township, but in some sort of equitable distribution of services.

Senator LEAHY. Doctor, prior to that research, was there any such data available? You have gone into some very significant areas. You have gone into the question of rural transportation, rural health care, rural access to services via the telephone. This latter area is a method that is being used more and more around the country. Was there any such data bank available before you did the research?

Dr. GORE. Probably two-thirds of the data were actually available but it wasn't available in the form that a local person could look at and say, "These are the needs of our area and here is how we could program our facilities better to meet the needs of the people."

Senator LEAHY. Thank you.

Would anybody else like to comment on the general availability of such data and its use?

Mr. **Russell.** I would like to ask whether or not in this case there is a "bottoms up" approach to collecting that kind of information at the Department of Agriculture? That is, do they have a system for collecting and retrieving information about USDA sponsored programs going on around the country for use by people or organizations who would rather not reinvent the wheel?

Dr. **Gore.** As far as I know this is not centrally collected. This would be done on a countywide basis. This has been replicated and used in 3 other counties in New York State and it was used for all 57 counties as a measurement tool to judge the success of the EFNE project, the expanded foods, nutrition, and education program which was under USDA and extension for 5 years and finished 1½ years ago. This was to provide nutrition information and surplus foods to disadvantaged and poverty families.

It was a fairly successful program. It was gradually phased out, unfortunately. But we showed, using this overlay method, that the programs were, by and large, at least in New York State, actually being located in those areas where there was the largest proportion of women in childbearing years, where the greatest poverty was present. You can stack four or five variables together and see where is the greatest need.

Mr. **Heffernan.** I would like to mention a project I happen to be involved with in Missouri under the general program support stemming from title V, but not requiring much title V money. The focus of the effort was the Merrimac region, a region receiving return migrants with various and diverse backgrounds.

The extension council and staff wanted to know more about the people in this region. What were their interests? What did they want? What did they expect from the community? What did they dislike about the community?

They came to the Office of Rural Development, which is funded by title V funds, and asked for some technical help. They received CETA money to help them do the interviewing. All they really needed was technical help to construct the interview, draw the sample, instruct the interviewers and then provide assistance in the data analysis. The title V funds required were minimal, but the information concerning what the people really want and why they are there is rather interesting. Many of the people who are coming back into rural areas want something different; they have left the cities for a reason. Some do not want all the urban services, but you only find out by asking them.

The major point is you must determine what everybody in the community wants. Too often only a certain segment of that population makes their desires known. This research made an effort to contact the whole range of persons in the community.

Senator **Leahy.** In talking about what segments show up, I think of testimony by Mr. Navarro this morning. Mr. French, concerning the Information and Extension Service in California, are their materials available in Spanish?

Mr. **French.** Usually not. It is kind of interesting. I happen to be a small farmer myself. I have 7 acres of walnuts and use the Agriculture Extension Service farm advisor for nut crops extensively and am on a mailing list. Because I am on the mailing list for that, my wife is on the mailing list for the Extension Service food and nutrition information program which comes out, which is a very nice little brochure that comes out once a month that talks about how to can things and whatever. It is all in English. It is very upper-middle-class oriented. It is oriented to the farmer's wife. It is oriented to my wife. It is not oriented to the clientele who need that kind of service.

Mr. Navarro talked about the Spanish-speaking farm advisers which were part of the title V program, and he mentioned that they were not going to be picked up by the regular program, and that they are trying to work on getting the Extension Service to pick them up as part of the regular program. It has taken a lot of energy on the part of a lot of people to try and work that out, and the way it is going to be worked out is by getting a CETA grant to go to the college system to pick them up. They are not going to be picked up out of the regular program. This stuff is not in Spanish and they do not have advisers who can got out, people who can go out and deal with the community that needs the help.

Mr. **Spangler.** I would like to make a comment on Missouri. They have a very outstanding community development program in rural areas. A number of years ago it was recognized that, as the previous gentleman indicated, credit problems and the availability of funds for leveraging, public works projects, neighborhood projects, et cetera, is not available.

The department of community affairs there did a somewhat lengthy and detailed study on the problem and found out that the State treasurer at any one time had excess cash on hand. It was distributed in the State banks in short time CD's. What they did was they developed a program where the State treasurer would invest the excess cash in banks with the condition, the caveat that 50 percent, or 75 percent of those funds would be invested, I think, targeted to rural areas. That has worked out very well.

Senator **Leahy.** One of the questions continuously emerging here, is what action can State governments take to encourage rural development research? Under the activities sponsored by the 1972 Rural Development Act, each State was to initiate a rural development committee.

Have any of you played a role on your own State's rural development committee? If so, have these sessions been useful in channeling research needs?

Mr. **Spangler.** I sit on the rural development committee and I think the greatest benefit of that is the interchange among the various people who sit on the board. I don't believe it has really resulted in any increase in research or any increase in programs, or targeting for the rural areas. It is more of a coordinating mechanism, information dissemination, understanding who is doing what, but not much of an influence on what they are doing.

Senator **Leahy.** Mr. French?

Mr. **French.** I do not participate on the council. In California, the council at this time is fairly inactive. It has sort of been put on the back burner by the new administration in Ag and Farmers Home.

Mr. **Heffernan.** We have one in Missouri. I am not a part of it, so I can't speak much to it.

Mr. **Russell.** An officer of the national association's board of directors, who is also the chairman of the Minnesota Rural Development Commission, was in town recently to testify before Congressman Nolan's Rural Development Subcommittee about the Rural Development Policy Act. He indicated at that time that Minnesota officials and the Governor had taken the Rural Development Council seriously and, therefore, have really accomplished some great things.

In fact, I think some people from rural America in the National Rural Center have identified Minnesota as the prototype, as a model for a very good rural development council in terms of the research and technical assistance which is provided.

Dr. **Gore.** I have attended probably half of the meetings of the New York State Rural Development Advisory Council, either as a representative of the president of the college where I teach, or as a researcher reporting, and usually these meetings have been as this gentleman indicates, a kind of reporting session, not great substantive issues taken up, and probably not great priorities set particularly on—"Yes, this is what New York State has to do for rural development."

Dr. **Doeksen.** I, too, serve on the State rural development committee, and I concur, they are a communicating vehicle. I think this has been useful in some cases. People now know what other agencies are doing in the area of rural development. They have not been instrumental in obtaining additional research resources.

Mr. **Russell.** Is that a function of how much support the Governor is willing to give it, in your opinion?

Dr. **Doeksen.** It is a function of the individual State agencies taking the initiative.

Mr. **Spangler.** And I might say that the information dissemination is very important. In fact, in my prepared comments I was going to highlight that, particularly for rural areas. It seems like the communication and the technology sharing is most important, even more than for the urban areas. I do participate in the committee meetings for that main reason.

Senator **Leahy.** One of the things we discovered when we were preparing for these hearings was the fact that many small communities, and State agencies, don't recognize the universities or colleges as people who can help them in solving their problems.

You all literally represent a cross section of the country from East to West. Have you found this to be true?

Mr. **Spangler.** As I said in the beginning of my comments, we are looking—being fairly new to my position—toward the universities and other organizations in the State to forge the partnership steeling some of the urban policy, forge the partnership for rural community development. In fact, we are going so far as to start talking about, in the future, a local government institute which will, obviously in our State, address rural development needs.

But we were going to talk about that with the college systems, and with UVM, the Extension Service and so on. I think what we need is a focal point in Washington for rural research. Right now, we don't know if it is EDA. We don't know if it is the Farmers Home Administration. We don't know if it is HUD. They are all doing it. We don't know if it is a section 111 program, or the new EDA program, or whether it is going to be the urban policy State incentives program.

We also need a partnership, a team effort, at the State level so that community development for rural areas gets defined in its broadest most comprehensive terms.

Mr. **French**. In California, small rural communities and counties do not use the educational system, and the educational system does not really open itself up to those communities. I really view the problem as a problem not of the communities but the educational system.

California is a large rural State which is controlled by a super metropolitan area, and it causes very extreme problems for rural areas in California. States like Minnesota, which are truly rural can deal with their rural issues a lot easier than a place like California.

California is, in a sense, like the country as a whole, where you have urban domination of the land yet the majority is rural. And that same problem comes through in California all the time. The universities are urban dominated, and so a small rural community, not only because the university is a different institution and a strange animal to deal with to start with, but also because it is very urban oriented, cannot deal with the university. The university has to find a way to reach those rural communities.

Mr. **Heffernan**. I am at a university but it is my feeling that by and large, large commercial farmers do look to the university. Often contact is made through the extension program which has been successful in establishing communication. Most other rural residents do not have that much contact with the university; they do not feel that extension can help them and consequently, they do not get channeled back to the larger university.

I have had contact with several low-income co-ops and I know that the leaders of these low-income co-ops basically do not think first of the universities as a place to turn for help. A few of them try to establish ties once in a while, but basically, the low-income persons with whom they work have not shared the benefits of university research. They feel that what is being done at the larger universities is irrelevant.

Senator **Leahy**. Mr. Russell, what about the national association, how do they feel?

Mr. **Russell**. We represent public officials from over 13,000 predominantly small communities around the country. The vast majority of these communities are run by selectmen or supervisors on a part-time elected basis. Most work full time, and frankly, it isn't always easy for them just to handle the basics, such as responding to revenue sharing program responsibilities. So, when we talk about things like community development and planning, or looking at the catalog of Federal domestic assistance, it is not the kind of thing which a township official can accomplish easily after a long day of work.

I think there needs to be better ways in which universities can get out to remote areas, cooperative extension people as well as the university officials as a whole, and I am not sure how you create that magic formula. There is not now much of an incentive for university personnel to go out to the boonies. That is just how it is.

I am from a rural part of Connecticut and went to a land-grant college at the University of Connecticut. We had a local government institute there, and it provided services for local governments throughout Connecticut. But, as you say, those services typically went to the paid staff of larger municipalities.

I don't know how to get local officials in better communication with the universities, but it is not good at this point.

Senator LEAHY. Do you feel the same way, Dr. Gore?

Dr. GORE. One of the better features that I found in the title V original legislation was that it included the eligibility for these funds to any institution of higher learning within the State, although the funds were to be administered through the land-grant college. And perhaps one of the answers to getting more locally based research, more kinds of things that are locally applicable, would be somehow, whether you mandate it, encourage it, or otherwise spring it loose, but get those moneys available to researchers within small colleges, or branches of the State university, or whatever. that are located throughout the State rather than all being channeled usually through departments within the land-grant universities.

Senator LEAHY. How about junior colleges?

Dr. GORE. That is possible, sure.

Senator LEAHY. Dr. Doeksen, do you feel the same?

Dr. DOEKSEN. Yes. I would like to expound a little farther. I think, again as a practitioner, there are some things that we need to do. We need to be in constant communication with personnel of State agencies, sub-State agencies, county agents, and others working with rural leaders, such that everyone knows our capabilities.

Often a community leader will comment, "I didn't know you had this program. I wasn't aware that the extension service could assist in this area". We need to inform others of our capabilities and we will receive fewer of the above comments. In summary, we do have a problem, and we need to work on it.

Senator LEAHY. Several of you have prepared statements which, as I said, will be made part of the record. In the time remaining, I wonder if any of you were going to testify from notes, or have statements you want to make as opposed to a prepared statement. I know Mr. Spangler does.

Mr. FRENCH. I was just going to comment on some of the things I have heard so far these 2 days.

Senator LEAHY. Why don't we start then with Mr. Spangler. If you would like to make your comments for the record then we will go down the line.

Mr. SPANGLER. I will keep these very brief. I would just like to bring up a couple of specifics.

I just came back from a meeting in Boston with about 35 departments of community affairs around the country so I had an opportunity to ask the question about the need for rural research and I came up with a couple of things.

First, I had lunch with Alex Mercure on Tuesday and asked him the question. He brought up the immediate problem for him. His father lives in the high country in Nevada or New Mexico. He heats his house by wood, which is not uncommon in Vermont. That heating system would not be permitted under the HUD minimum property standards, so that raises a question.

Although we have the Department of Housing and Urban Development that certainly understands the comprehensiveness of the term community development on the one hand, they do not have rural orientation or the flexibility to deal with rural problems. I think what we need is a good analysis of all of our Federal legislation, and particularly the 16 or 18 pieces that are coming down in the next couple of weeks on the urban policy to see what impact they are going to have on rural areas so that community impact analysis as part of the urban policy is extremely important and should have a special twist for rural areas.

We do have two research problems that come to mind; solid waste and water quality. Of course, we have the water quality management program in EPA, and we have the Resource Conservation and Recovery Act. Neither of those programs targets funds for rural areas and we are finding out that there is a deficiency. They are rural research not conducted by the land-grant system, but they are rural research nevertheless. We are lacking targeting of funding for rural areas, and I am not sure whether the legislation like that should have a target for rural areas but there should be some orientation, some recognition that they get their fair share.

Last, the 701 program, I believe Congress targeted $10 million of the $57 million appropriation last year to rural areas. We are finding out that the fund plan of HUD only allocated $8 million. I think that my previous comments on the value of the 701 program in rural areas certainly suggests that another look in the budget committee is necessary as far as, first, the level of 701 funding, and second, the perhaps targeting of that specifically to rural areas.

Thank you.

Senator LEAHY. Thank you.

Mr. FRENCH. I have already commented on Secretary Cutler's testimony yesterday. Mr. Farrell's testimony was also very interesting, on the positive side. It was very good. It was very encouraging to hear somebody talk with such optimism about potential for rural development research.

My concern is are we going to come back in 5 years and still talk about that there is no information, there still hasn't been anything done. How are we going to insure that somebody with his apparent understanding of the needs of rural development research can have the money and the freedom to try and make the system work to what it is going to be.

A lot of the talk that has gone on in these 2 days has been about what has happened in the past. I think we need to worry about what is going to happen in the future, not whether or not the university system has worked, or whether or not the Ag extension system has worked. We should worry about what it ought to be, what problems it ought to be addressing, and then develop programs to make that research and that work.

Mr. Cutler spent a lot of time justifying his action based upon zero-budgeting approaches. You develop programs and legislation from a zero-budgeting basis too. You look at what you need to do and then don't worry about what is already existing but develop the program to answer the needs for what needs to be done. And the problem with the legislation and things that happen is they are designed to take care of what is existing, what has happened in the past, or to clear up a problem in the past instead of to address a real need or a real direction for now.

Rural areas, as talked about yesterday, and you mentioned again today, are undergoing tremendous growth. Part of the reason for that is a myth, which is a good myth—I live in a rural area—about the quality of life in rural areas. There is something good about the quality of life in rural areas. I personally am very concerned that the in-migration into rural areas is going to destroy that thing which lends itself to make that rural quality of life. It is hard to define, and one of the research issues that is very difficult to deal is, what is the quality of rural life that makes it so nice, that creates that myth.

But, is that going to be destroyed by this tremendous influx, and how is that going to be dealt with? In California, about 60 percent of the farm production is created by 10 percent of the farms. The rest of the farms produce only 40 percent of the production, but they are 90 percent of the farms. On those farms there are other sources of income. About 63 percent of farms of 180 acres or less, over 63 percent of the households reported additional income other than farm income. That additional income may be something which is really needed in order to make that type of farming viable.

My personal concern is that in the change in what is happening in rural areas with the influx of people coming in from urban areas into rural areas, and the need, as was mentioned by a panelist earlier today, to urbanize rural areas by providing them urban services, are we going to destroy the quality of life in rural areas and destroy it before we have known it has been destroyed so that when it is all over with, all we have are pieces.

I am afraid that we are very close to the edge of that and there is nobody in this society that is looking to try and find out how to deal with that issue before it is too late.

Senator LEAHY. Mr. Heffernan.

Mr. HEFFERNAN. I just have a few comments here.

In response to this I am reminded of one of the old farmers who was commenting about the new people moving into his community and reportedly said, "I'm not quite sure what it is they are trying to get away from, but whatever it is, they seem to be bringing it with them."

Senator LEAHY. I have heard that a number of times in Vermont.

Mr. HEFFERNAN. I am tempted to comment on the problem of using what I consider urban organizational models to provide services in rural areas, but I think I will pass it on now. I have included it in my statement.

There are a couple of things I want to underscore. When we think in terms of rural development and planning for rural areas, we too often tend to speak about rural communities as if they are homogeneous groups of people. Rural communities are different. They have different aspirations, different problems, and they are coming from quite different positions.

Some of them are agriculturally based, some are recreational based, some are mining based, some depend on fishing and lumber industries. Some are primarily retirement communities and others are what we refer to as bedroom communities. Some of them have very good services; services which are very comparable to what one would find in a suburb. Some have very poor services. But, furthermore, some of the people want more services and others of them do not want all the services that they received in urban areas.

I think we need to keep this in mind and when we start developing programs for rural areas. It is so easy, as we have done with our urban models, to simply devise one model. Maybe one of the things we can be thankful about is that some of our former programs have not been successful. If they were successful we would end up with just a single model for rural communities. The uniqueness needs to be maintained.

The other point I would like underscored is that when we are working with rural communities we need to really think of total packages. In some States title V has tried to pull together some of the various Government agencies and their functions.

When we are working with a low-income farmer, for example, he needs capital. We need to understand his view of borrowing. One of the things that I have been told by many of these low-income farmers is they are not about to mortgage their land to obtain operating capital. They have been told by their parents, by their grandparents and by their great grandparents, "Do not ever put a loan on that land or you'll lose it." That means, in many cases, no FHA loan.

In addition to capital, they need some managerial help. If a farmer has never raised hogs before, and he acquires 10 sows, he needs some technical help. This includes very basic types of information in terms of feed and management decisions. He probably also needs some type of marketing assistance. The usual marketing channels that many of the low-income farmers are selling through now tend to be rather exploitative. Feeder pigs, for example, in some areas of the Southeast will sell at the local markets for $10 or $15 a head less than they sell for in areas where the market is less controlled.

Such low-income farmers also need help in learning to work together with others so that they can control their destiny. The point is that we need to think in terms of packages. Our research and the programs that we put in place have to start bringing all these pieces together. Many of the resources may already be available in segmental forms in the community. It may take some outside technical help but often the resources are already available and just need to be reorganized a bit to focus on a particular problem.

Senator **Leahy**. Anybody else?

Mr. **Russell**. I would like to just say before I make my final extemporaneous remarks that I think we all know the squeeky wheel gets the grease in Washington and at the State level.

I had a meeting not too long ago with Mario Cuomo, who is the Secretary of State in New York, and he said:

> Frankly, small towns in this State have no political clout, and it takes a little bit of moral leadership, a personal decision at the State level in terms of policymaking to give them some clout.

I think that is true at the national level, and believe this hearing represents a pioneering effort. You, Mr. Chairman, and your staff are to be commended for holding these hearings because I think, hopefully, they will mark the beginning of what will result in something pretty positive. Because small towns do not have an effective voice in Washington it takes the leadership of individuals like yourself in the Senate, and Rick Nolan in the House, to do these kinds of things. I appreciate that.

Senator LEAHY. Thank you very much. Congressman Nolan and I have worked very closely together for some time now on a number of these issues. The subcommittee that he chairs and this one have a number of areas of overlapping interest. I am constantly amazed at not only his energy but his initiative in a wide variety of areas.

Mr. RUSSELL. I have had the opportunity to meet you both at the Kennedy Center on a rural food——

Senator LEAHY. I recall that. In fact, as you know, the President has established a commission.

Mr. RUSSELL. Yes, and I think it is very exciting.

Senator LEAHY. Members will be named later this month.

Mr. RUSSELL. It is very exciting.

I just want to share, if I could for a second, an experience the National Association had when it was first established less than 2 years ago, when the Carter administration first come to town. We prevailed upon the White House Intergovernmental Relations Office, which was headed by a fellow named Jack Watson.

We expressed our concern that small townships were not being given adequate treatment in the Federal policymaking process. The response was, "That's true. We're sensitive to the problems of small towns but we just don't have enough data about them. We don't know what their needs are. So, it was suggested that NATaT develop a laundry list of nonmetro community problems and identify the institutional obstacles they face in the Federal system.

Needless to say, that kind of grand scheme was impossible at the time and it made no sense for our group to undertake such an effort. But I think it does say something—and I want to underscore this point—about the Department of Agriculture. If USDA is to be the focal point for concerns related to small towns and rural areas—and I think that is the question—I think the Department needs to develop that inhouse capacity to advise the President.

Not only should they have the capacity, as I said earlier, to have a think tank kind of thing like that, but they also ought to have the energy and initiative to pursue the findings of their research. I think Al Mercure, Bill Nagle, and Gordon Cavanaugh are people that have that intention and desire.

The last comment I would like to make has to do with the impact of the concerns of local officials and State officials of USDA's research priority setting schedule. I think that the National Association of Towns and Townships, in cooperation with the Council of State and Community Affairs Agencies could provide USDA with real life experiences and real life priorities that public officials have in terms of Federal rural programs. Yet, there really is no place in the Department of Agriculture, no major office of intergovernmental relations for that input to take place, for that exchange to take place, so that research that is developed and research that is carried on by agencies like the Economic Research Service would have some applicability to the real concerns of local officials from small communities.

Senator Leahy. Thank you. Does anybody else want to add anything?

Dr. Gore. Just very briefly. I have a statement to give you, but I would like to underscore that if title V can be retained and, hopefully——

Senator Leahy. Adequately funded.

Dr. Gore [continuing]. Adequately funded to the level at which it was expected originally even, that this would help to continue research locally based that often can involve local institutions. I hope that it would be increased and that this research would be interactive with local citizens so that they are learning the needs of their community and how to bring about solutions to those problems.

Senator Leahy. I think the biggest problem we have heard concerning title V in these hearings in simply the lack of funding in contrast to the way that it is set up. I think we all have heard here also that simply just throwing money at the problem is not going to do away with it.

When we face the situation where people in rural America have to grope around to find out who is in charge, whether it is the Department of Energy, HUD, USDA, or anything else, these results do not reflect an adequate policy by any means.

The urban policy, I think, will end up as being a well-organized, highly visible and articulate one. It will be an urban policy that we can look at. I don't want to see a policy for rural America which promotes a homogeneous rural scene stretching from Maine to Hawaii. However, I would like very much to see policy for rural America such that you would know where you can go for planning, where you can go for research, where you can go for development support within the context of any sector of rural America be it a county in southern California or a county in the northeast "Kingdom" of Vermont.

We don't have that kind of a rural policy now, and we need one. We need, first, a visible policy promoting programs where people know what is available and know where to go for support. Such a policy should be well organized and adequately funded. I think this is long overdue. Again, we have the problem where we can see the ills of the city, however defined. They are on the front pages of our newspapers virtually every day. They are on television virtually every evening. There is the political clout of the number of urban voters.

Certainly, anyone that holds a national office; and, thus, any President is going to pay attention to urban concerns. Most Senators have large areas with well-identified blocks of votes. They are going to pay attention to the urban core. And, somehow, rural America, which is so fragmented, gets the short end in all of this activity.

Research is one outcome that can show some cohesion under an articulate rural development policy. But I think all of us with concerns for rural America have not to work collectively to create a visible coalition for rural equity. I have been extremely impressed by the number of people we encountered in preparation for these hearings who were willing to devote a great deal of their time, effort, and expertise—the six of you, the people who testified before you, and the large number of people who have sent material in to us. I really want to first thank all of the people who testified today and yesterday and all of the people who have sent materials in. It has been extremely helpful.

But, on a more personal—and perhaps more parochial—level, as a Senator from the most rural of all our 50 States, I can assure you that the time is not wasted time. It is not time that is going to go into just creating a nice hearing document to collect dust somewhere. Both as chairman of this committee, and as a member of the Appropriations Committee, I will do my utmost to make sure that the work that you have done, the consensus that has been seen here, will come forth into a rural policy.

I will work at that level not only in the Senate but also with people like Congressman Nolan and others who have taken an interest in this subject in the House, but also with the President, and with the appropriate members of the Cabinet.

I thank you all very, very much. We will adjourn the hearing and keep the hearing record open for 10 days for additional comments.

[Whereupon, at 11:15 a.m., the subcommittee adjourned, subject to call of the Chair.]

APPENDIX

HEARING OUTLINE

I. WHAT IS NON-FARM, NON-FOOD FIBER, RURAL DEVELOPMENT RESEARCH?

A. How is it defined by USDA and categorized by Current Research Information System, (CRIS)?

B. Examination of the nature of rural development research within CRIS.

C. Testimony toward a definition of Rural Development.

D. How much of what is reported is actually rural development research. (e.g. fits the definition).

E. Number of Scientific Man Years and total dollars allocated to rural development research by topic and area.

F. The role of Rural Development Service in research priority setting within USDA for in-house and land grant research.

G. The need for a separate research agency within USDA devoted solely to non-farm, non-food and fiber rural development research.

H. Coordination of in-house rural research among the different USDA research divisions.

I. Coordination by USDA of other federal agency rural research.

II. ANALYSIS OF RESEARCH PRIORITY SYSTEM FOR USDA AND LAND GRANT SYSTEM, INCLUDING THE COLLEGES OF 1890

A. This analysis will focus on how non-farm, non-food and fiber rural development research is represented in the priority system.

1. Is the system dominated by agricultural and food and fiber concerns?

2. If so, what can be expected for future rural development research?

3. What can be done to increase the concern for rural development research at the federal and state level?

B. Projections for rural development research.

1. Will they and can they be met?

2. Should they be greater?

C. Composition of the various research priority committees.

1. Representation of rural development researchers.

2. The need for non-government, non-university representatives of rural people and communities.

D. Examples of inability of researchers concerned with rural development research to receive funding and support from USDA and the Universities.

1. Rigidities within Land Grant System which prohibit certain rural issues from surfacing-suppressed research.

E. Title V Research.

III. APPLICABILITY AND AVAILABILITY OF RESEARCH TO RURAL PEOPLE: ISSUES OF ACCESS AND USEFULNESS.

A. Examination of application of present research to rural situations.

B. The role of Extension Service.

1. Lack of extension communication with non-farm rural people.

2. Do we need new and different structures for dissemination of rural development research?

3. What rural people are not being serviced by the research and Extension efforts of the system?

4. Are the alternative forms of rural development being served by rural development research and extension? (e.g. Consumer cooperative, alternative housing, health, clinics).

C. How can more emphasis be placed on applicable research for rural development concerns?

A. Outline—A key to letters and papers submitted for the hearing record.

Comments: One of the reoccuring problems in attempts to provide a detailed hearing record is the simple issue of finding and, subsequently, bringing to town, representative sampling of those most affected by the topics under investigation. At Senator Leahy's initiative, a list of those potentially concerned with rural development research was compiled. Although this attempt was in no way an exhaustive identification of all parties concerned with rural development research, some 190 organizations and individual contacts were identified in relation to these hearings.

In the process of contacting these sources, it became clear that many of those with cause to testify simply could not afford to travel to the nation's capital. In addition, 6 hours of hearings could not possibly accommodate all of those concerned. The documents in Section D below reflect letters and other materials submitted by interested parties throughout the nation. These materials have been obstructed and are presented here in chronological order.

In Section C the abstracted comments are keyed to the outline which accompanied our invitation to submit testimony. Materials which accompanied each letter are included only when they are not readily available elsewhere. However, all materials submitted are duly noted in Section E, the Bibliography.

I. WHAT IS NON-FARM, NON-FOOD AND FIBER, RURAL DEVELOPMENT RESEARCH?

Comment: In the planning and design of these particular hearings we found that it was very difficult to include a farm focus because the overwhelming research tradition reflecting large scale farm production and marketing tends to monopolize any dialogue. However, testimony was submitted concerning research needs in the area of small farm policy. Two of these (previously unpublished) pieces are in the record below with covering letters.

1. Chapman, James and Kevin Goss (submitted 5/26/78), "Toward a Small Farm Policy in the United States." Unpublished Manuscript (September).

Chapman and Goss, researchers at Michigan State and Pennsyvania State University, respectively, deal with the diversity of small farm types and the challenge this presents for both rural development research and policy: "For policy purposes it is vitally important to attend to the small farm situation as part of a rural development program rather than agriculture commodity subsidies."

2. Powers, Sharon, Jess Gilbert and Frederick H. Buttel (Covering letter, April 14, 1978) "Small Farm and Rural Development Policy in the U.S.: Rationale and Prospects." A paper prepared for presentation at Rural Sociological Society Annual Meeting, September, 1978. The authors deal comprehensively with the policy context for consideration of small farm foci as instrumental to rural development initiatives. Also see Buttel letter (4/14/78): "* * * what I feel is needed is more work on how particular agricultural policies (e.g., encouraging small-scale agriculture) can have beneficial rural development consequences. Put somewhat differently, it seems that rural development policies divorced from secular changes in the agricultural sector may not yield significant leverage on the problem."

Other testimony

See Busch letter (4/11/78): "true rural development is unlikely to take place until it is integrated with agricultural issues."

See Fujimoto letter (4/19/78): "and reference to his testimony at the Hearings held by the House Committee Agriculture Subcommittee on Family Farms, Rural Development and Special Studies, Sacramento, California, October 28, 1977. (Full documentation in the bibliography). Also see article by Fujimoto and Zone(1976).

See Louis letter (4/21/78): "If the research does not concern agriculture (farm, food and fiber) or animal production, an institution other than USDA must take care of (it)."

See Grissom letter (4/22/78): "It is a mistake to identify non-farm rural development research as a separate concern apart from the current food and fiber research efforts in the USDA and the land-grant institutional system. This is either an admission that the present system is unworkable and must be circumvented or a failure to understand that rural development problems are in large part the outcome of agricultural policies that have been encouraged and justified by research which has externalized and ignored all but the narrowest measures of efficiency and gross farm sales."

See Wheelock letter (4/25/78): "In summary, I feel it is a mistake to treat the non-agricultural aspect of rural development research as being unimportant to agriculture."

See Ward letter (4/26/78): "It seems important also to determine to what extent rural development includes production in marketing of food products or whether the emphasis will be upon subsistence food production. An associated question is whether it is necessary to assess the energy and economic efficiencies concerned with rural development or whether it is considered that the social benefits of development override the questions of economics."

See Madden letter (4/27/78): "where a proposal for legislative change would facilitate integration of rural development and small farm research and extension activities."

See Pigg statement (4/28/78): "To segregate 'farm' from 'non-farm' rural development research will only compound the problem. The development and selection of rural development strategies are, by necessity and preference, locality specific. In some cases, industrialization strategies may be appropriate and desirable. In other cases, it is not and community residents should be able to consider and pursue alternatives—which would include agricultural strategies. I believe this to be the real intent of RDA–72, but, at present, this is not an accessible strategy because we have devoted little research effort to either means or effects, and so, have effectively ruled it out. To continue to deal with rural development in "pieces" only perpetuates the mindless and tragic dualism which has contributed to both the contemporary farm problem and problems of rural development."

See Zippert statement (5/5/78): "Although a large segment of our constituency is engaged in farming, we have many who are not, so that the need for non-farm rural research touches a sizeable portion of our membership. Furthermore, it is our belief that the farm and non-farm sectors of the rural economy are not mutually exclusive. Rather, their fates are tied to each other; the one being totally incapable of sustaining any meaningful growth without the other."

See Schickele letter (5/25/78): "It is research dealing with problems *not* reached by research in farm production and management, but with problems arising from the broader *socio-economic and rural community environment* within which the individual farm or town family lives. For instance, important problems in rural areas in the fields of (1) *home economics* (in basic terms applicable to farm and non-farm families), (2) *role of cooperatives* as links between the farm and non-farm sectors of the economy, (3) *rural town and community services* (e.g., schools, churches, vocational training, medical services, roads, communication, etc.), (4) constellation of *local and state tax* burdens and their incidence on farm and town families."

A. How is it defined by USDA and categorized by Current Research Information System (CRIS)?

See Chapman and Goss article, below.

See Busch letter and paper below (4/11/78).

See Sinclair, et al. letter (4/24/78).

See Clayton statement (5/1/78): "In working with the Current Research Information System (CRIS) it has become apparent that a considerable lag is involved between the time Rural Development Research is conducted and the time of its reporting via CRIS. Although the current hearings are not directed at the CRIS process, per se, perhaps something could be done to improve its performance." "* * * It might also be appropriate to identify researchers and others at non-Land Grant schools conducting Rural Development research."

B. Examination of the nature of rural development research within CRIS

See, initially, testimony from USDA submitted at the hearings.

See Sinclair, et al. (4/24): "The Northeast Regional Center for Rural Development in a 1973 report, listed a set of criteria for differentiating between rural development and other research (Exhibit I, attached to letter). We do not know if this is currently being used by CRIS, but it seems to us to be a logical system for differentiation between rural development and non-rural development research."

See Clayton, statement (5/1/78): Although categories of Rural Development research may be common across all states and nationally, the particular emphasis within a problem area as well as between problem areas is likely to differ. For example, public services research may be most critical in the midwest while coping with growth may be of highest priority in the Sunbelt states. I am not convinced that a centralized priority system makes greatest sense in this instance. At the same time, there will, no doubt, be problems common to all states that USDA would be in good position to identify, either conducting needed research itself or encouraging representative states to do so.

As an aside, at this point, I would be most interested in the role envisioned for the Rural Development Service once it has been combined with the action-oriented Farmers Home Administration. Will this affect the types of priorities it would identify? Also, where does the Economic Development Division of ESCS fit into the USDA schema for Rural Development research?

C. Testimony toward a testimony of Rural Development

See Stuby article enclosed below.

See Bibliography: Osburn, Congressional Research Service. "Rural Development: The Federal Role."

See Bibliography: Rogers and Whitney (editors), 1978 Rural Policy Research Alternatives.

See Patton letter 4/10/78: "Recapitalization is the most important single need for redevelopment of all of rural America." "We need a genuine development policy."

See Fujimoto letter (4/19/78) and bibliography.

See Sinclair, et al. (4/24/78): "We would argue that the one broad goal of rural development is to improve the quality of life for rural people. In the northeast, three out of every 10 people are "rural" residents; in Vermont this classification would include virtually all of the state. Because quality of life may be as numerous as the number of people trying to define it. But there may be more consensus as to what variables affect quality of life. Quality of life relates to the wants and needs, hopes and aspirations of people. It relates to the creation of job opportunities in rural areas, to the improvement of the quantity, quality, and access to community services, and to an improved social and physical environment. While the ultimate research goal is improving the quality of life for *people*, the research effort often may be devoted to the *physical* resources, e.g., housing, land use, transportation, etc."

See Madden (4/27/78) and Cornman Materials (2/14/78): "We draw the distinction between *rural development* in the broad sense versus *economic development*, which is one of many possible forms rural development can take."

Rural development encompasses the many dimensions or conditions which determine the quality of life: access to public services and facilities; economic development; protection or enhancement of natural and environmental resources; and the capacity of rural people, communities, and institutions to interact effectively in identifying and attaining goals. Each of these dimensions can be viewed in terms of its *present level or state* (e.g. availability of health services, median income or employment) and in terms of its *trends* (e.g. important, stagnation, or deterioration of the local economy, services, or environment). Development then, is a normative term implying the attainment of levels and trends desired by people themselves.

Economic development means "improving" the level, distribution, and stability of earnings and employment. This can be done in a number of ways, such as increasing the productivity and/or efficiency of existing firms and resources. It can also be done by expansion—enlargement of existing firms or entry of new industries. Expansion is not feasible in all rural areas, nor is it everywhere desired or appropriate. In areas experiencing very rapid growth, for example, local residents might feel that an "improved" trend is a *reduction* in the rate of economic expansion. Therefore economic development is a goal of a comprehensive rural strategy, but only one of many goals and a goal which must be shaped to local desires."

See Eberts letter (4/28/78). Comments pertain to a USDA-CSRS regional project findings for Northeastern rural counties: the definition of development refers to increases in socio-economic resources (including income, education, and occupational skills) and in human and community services available to people in such a way that they feel increasingly better about themselves and the places in which they live." ". . . Under this definition, indicators of development for the 300 Northeast U. S. counties show that more rural counties are generally becoming better off since 1950, but that other counties are improving at an even faster rate." . . . "The major question to be asked and answered is, why are the more rural counties falling behind the others even as they are getting better?"

Also see Eberts (4/28/78) under Section II. A of this outline, below.

See Clayton statement (5/1/78): "First, a broad general largely ineffectual for research/extension use. Statements such as "improving the economic and social well-being or quality of life of rural residents" do little to identify rural needs. Likewise, the failure to incorporate specifics contributes nothing to a research/extension taxonomy. An operational definition of Rural Development is needed that captures rural concerns and puts them into a workable research/extension framework. I realize that being too specific may unduly handcuff USDA and Land Grant personnel, however, the trade-off in flexibility for a usable definition ought to be evaluated."

D. How much of what is reported is actually rural development research? (e.g. fits the definition)

See initially, the response to this question from USDA, written testimony.

See Sinclair, et al. (4/24/78): "Research in rural development has generally fallen into one of three broad categories. The first of these is "state of the arts" research which involves analysis of past studies with either a theoretical or an applied orientation and relating these to current rural problems. The second category relates to analytical research designed to determine the relevant variables in the development process and to gain a better understanding of the nature of rural development. The third type involves either theoretical or applied studies of basic policy issues, with the goal of providing a more firm basis on which policy decisions can be made. It is important to emphasize that research in rural development involves a complex set of economic, sociological, political, and value-laden issues and expectations of immediate payoff may be overemphasized. This may have been one of the problems when the Congress first funded rural development research several years ago, with the premise that results would be evaluated in 2 years."

E. Number of scientific man-years and total dollars allocated to rural development research by topic and area

See Administration Testimony.

F. The role of Rural Development Service in research priority setting within USDA for in-house and land grant research

See initially the response to this question from USDA in Assistant Secretary Cutler's written testimony.

See also Christman statement (with letter, 4/18/78) which identifies research priorities as control by various regional communities operating under the Title V sponsored regional centers.

See Louis letter (4/21/78): "A great deal of research has been done in several facets of agricultural and animal productions which are directly linked to the rural development. Now emphasis must be made on "reaching out" to those rural individuals who still remain on their land . . . . to improve their standard of living in every way, health, communication, etc. * * *"

See Clayton statement (5/1/78): "It would seem that considerable emphasis has been placed on the so-called 'small farms' problem set. In at least certain instances I would expect that this has occurred at the expense of non-farm, non-food and fiber rural development research. I have no particular quarrel with the small farms program. It does deal with subject matter that is more generally in line with traditional USDA/Land Grant agricultural programming. I would hasten to point out, however, that it does deal with only a part of those who live in rural areas and with only a portion of the rural development problem. To the extent that small farms never become more than subsistence or part-time endeavors it is particularly important that questions such as rural industrialization be addressed. Also, in those states experiencing rapid population growth it is often the small communities, as a whole, that are most in need of assistance."

See Zimmerman statement (5/1/78): "We are thinking specifically of Section 603(b)(4) of the Rural Development Act of 1972, which directs the Secretary of Agriculture, in the language of a guide to the legislation prepared in 1976, "to initiate or expand research and development efforts related to solution of problems of rural water supply, rural sewage and solid waste management, rural housing, and rural industrialization. The Congressional mandate enunciated in this Section has never been adequately implemented because the Secretary has never had sufficient financial reseources to carry out an innovative and viable rural research and development effort. We believe that the Congress can better achieve the purpose of the Section by providing to the Secretary at least ten million dollars annually for research and development projects."

G. The need for a separate research agency within USDA devoted solely to non-farm, non-food and fiber rural development research

See Patton letter (4/10/78): "We need a national land use policy integrated with state land use planning and much stronger state land use laws." . . . . "We need a multi-billion loan and grant rural development bank . . . ."

See Busch letter (4/11/78): "Agricultural research is well supported not only because of friends in Congress but also because of the corporate interests it serves. This is both its strength and its weakness. In contrast, rural development research serves no definable interest group, and, as such, it is under funded. It would do us well to remember that USDA created the Grange and the Extension Service created the Farm Bureau. Perhaps we need a similar organizing effort around the rural non-farm population."

See Faux letter (4/18/78): "What are the implicit or explicit *strategies*, if any, for rural development upon which current and proposed nonfarm research is based? This is a crucial beginning point. My guess is that, however nonfarm research is defined, it is in fact primarily a series of ad hoc projects that are not aimed at testing or exploring development strategies. Without a strategic context, the pieces of research do not build on each other and tend to be isolated and of very limited use."

See Louis Letter (4/21/78): "If it (non-farm non-food and fiber research) is funded by USDA, a separate research agency must be solely devoted to that."

See Fiske, et.al. (4/27/78), Proposed Abstract.

H. Coordination of in-house rural research among the different USDA research divisions

On The Role of ERS and EDD in rural life quality research—see Study (article enclosed): "ERS should expand its efforts to develop indicators of life quality that are germane to a variety of research-policy contexts in this agency (USDA)."

See Zimmerman statement (5/1/78): "A program for this purpose (coordination) should become a permanent part of the Farm and Rural Development Administration, the successor of the Farmers Home Administration, which now include the Rural Development Policy, Management and Coordination unit. As such it would augment in-house efforts of this agency for policy development, policy coordination and training. The administrative costs involved in conducting such a program in this context would be nominal and more than offset by the results that could be achieved through the direct involvement of organizations concerned with rural causes in the overall effort to identify and solve the special problems of service to rural areas that are identified by Section 603(b)(4) of the Rural Development Act."

I. Coordination by USDA of other federal agency rural research

See Patton letter (4/10/78): "We need a specialized commission established to set up standards and measuring sticks to establish departments of rural development in each and every land grant college."

See Zimmerman statement (5/1/78): "The use of funds for research and demonstration projects is important to the federal approach to problem-solving, program development and program monitoring, and to the role of the Department of Agriculture in the federal rural develovment effort. Funds are available for this purpose under programs of such agencies as the Department of Housing and Urban Development, the Economic Development Administration of the Department of Commerce, and the Department of Labor. However, these agencies have become increasingly urban in their orientation. The result is that organizations working to justify and improve *urban* programs have access to funds, while those devoted to *rural* causes do not, except as they are able to obtain ad hoc assistance from a variety of federal agencies."

See Johnson letter (5/18/78): "Agricultural issues can no longer be considered separately or isolated from the decisions affecting small towns. Ways must be found to integrate the rural community and to improve the quality of life for both farm and non-farm people. Research should be directed toward that goal and be used as a basis for a continuing program of comprehensive, integrated rural development. All of the education and social agencies, not just the land grant colleges or USDA's own divisions, must be brought into this effort."

See Clayton statement (5/1/78): "The issue of coordinating Rural Development research among federal agencies is important although I suspect that may be as much a political question as it is substantive. Certainly at the state level this sometimes becomes the case as we attempt the dissemination of results. The large number of state and federal-thru-state programs that are directed to rural areas, but administered by other agencies, sometimes places Land Grant personnel in a competitive position. We have found, however, that communication between agencies reduces friction and quite often fosters cooperation. In fact, a more interesting question emerges at the state level as to how much research back-up Land Grant institutions can provide so that local areas may participate more effectively in the programs of other agencies. For example; what sorts of health care delivery research can be done to facilitate health care planning efforts? What are the system alternatives for rural public services that might be funded via a Federal program?"

II. ANALYSIS OF RESEARCH PRIORITY SYSTEM FOR USDA AND LAND GRANT SYSTEM, INCLUDING THE COLLEGES OF 1870

See Busch letter (4/11/78): "The commodity specific character of advisory committees at all levels within USDA and the Land Grant Colleges has several deleterious consequences: first, it encourages one crop farming and hence makes small farmer participation difficult. Second, it ignores overall goals and focuses upon means (productivity). Third, it puts rural development issues into a strictly sideline category."

See Fujimoto letter (4/19/78) and bibliography, especially proceedings from a conference, "To Initiate the Redirection of Priorities for University Research," entitled "The People and the University."

See Sinclair, et al. (4/24/78): "There have been several research planning committees to establish rural development research priorities in the Northeast. These have been organized under the aegis of the Northeast Regional Rural Development Center at Cornell and a list would be available from Dr. Lee Day, Director of the Center."

A. *This analysis will focus on how non-farm, non-food and fiber rural development research is represented in the priority system*

See Busch letter (4/11/78): "The general goal of achieving efficiency dominates agricultural research. It is generally defined quite narrowly and in such a way as to imply single, simple solutions to complex problems. Rural development research may address these issues in one of two ways: first, it may attempt to demonstrate how certain policy alternatives are in some sense efficient. Alternatively, it may abandon the goal of efficiency as irrelevant to rural development research. If it does the former, it merely perpetuates the illusion of a single optimum. If it does the latter, it may receive no funds at all."

See Fujimoto letter and materials (4/19/78).

See Bossi letter (4/25/78): "Anyone who has been involved in rural development work for any length of time can cite instances where decisions regarding research to be undertaken or published have been motivated by political considerations serving the interests of the researching institution. That decision making process should be brought out into the open and the best way to do that is to provide for public oversight and participation."

See Fiske letter (4/27/78): Fiske calls attention to a paper by Fiske and Zone entitled "Rural Non-Commerical Research—The University of California: A Case Study." (See Bibliography). This paper demonstrated the improbability of changing research directions and reordering priorities without a concomitant change in the institutional structure. Also see abstract of Fujimoto and Fiske paper under Section II, A. 1. below.

See Johnson letter (5/18/78): "The Department of Agriculture devotes 90 percent or more of its research budget to agricultural production and has given very little attention to all of the other needs of the on-farm and small-town people in the country. Other agencies of government usually perform as if there were *no* rural America."

1. Is the system dominated by agricultural and food and fiber concerns?

See Patton letter (4/10/78): "The present Agricultural College Research is commodity and profit oriented and believes that in all cases bigger is better. A rural sociologist who thinks in terms of people first and commodities and profits second is usually fired as soon as he offers such opinions. He seldom lasts long enough to be tenured."

See Busch letter and article (4/11/78): "Part of the problem stems from the fact that agricultural scientists have a very narrow way of defining research problems. As a result, despite their avowed applied emphasis, only technical, as opposed to social, issues are addressed." (Also see enclosed paper by Busch.)

See Fujimoto letter (4/19/78) and bibliography, especially articles, by Fujimoto and Fiske (1975): "Factors that influence faculty in a land grant college of agriculture to do the research they choose to do, can be grouped around the following areas: a scientist's quest for knowledge, funding, academic socialization and sensitivity to pressing social needs. The relative import of these factors can be summarized as follows: scientific curiosity gets the scientist into the research system, funding determines what is worked on and the process of academic socialization affects the strategy taken—especially by the non-tenured faculty. Research considerations in response to broader social trends, be it the food, population or energy crisis or sensitivity to the concerns of the consuming public, is at best diversionary unless such response is congruent with the overall thrust of the College of Agriculture or department of which the scientist is a part. Departments provide a social milieu which reflects differences in sensitivity to redirecting research or inclinations to examine the broader implications of the research done. The implications of those observations, based on interviews with tenured and non-tenured faculty and chairmen of all 25 departments in a major land grant college of agriculture, is discussed, especially in view of increasing calls for accountability by public interest groups."

See Zimmerman statement (5/1/78): "Questions of technology have been explored far more than policy questions."

See Grissom letter (4/22/78) and the case materials which accompany the letter.

See Sinclair, et al. (4/24/78): "We see no evidence of 'domination' by agricultural and food and fiber concerns. In our experience, good research proposals will be funded, given the constraints of available research funds. Obviously, we could use additional resources, but we recognize that there are legitmate production agriculture priorities as well."

See Ward letter (4/26/78): "The type of information required by people interested in small scale agriculture are certainly of a different scale than commercial agriculture. Does this mean that new research programs are necessary to develop information for this clientele or can the necessary information be obtained by scaling down from commercial agriculture?"

See Madden letter (4/27/78): "This is a little like asking whether McDonalds is dominated by hamburgers. Having established a successful business based on hamburgers, McDonalds has recently introduced new choices such as fish sandwiches and apple pie. History shows clearly that the experiment stations and the extension services were founded specifically for the purposes of increasing agricultural productivity. Dramatic successes such as the development and universal disseminatioin of hybrid seed varieties, artificial insemination, and various mechanical harvesting devices have greatly expanded farm output and have kept food prices from rising as rapidly as they would have in the absence of such technological changes. These successes have been caused largely through long term Congressional and Executive support for research and extension at the land grant universities.

Only in recent years has it become clear that agricultural "progress" sometimes is accompanied by decay of rural communities. It stands to reason that the attention of the extension and research communities would continue to be focused primarily on agricultural concerns—this has been their bread and butter for decades. Rural development is a "Johnny-come-lately," and in many locations it has not yet established a successful track record. Nor has it—and this is very important—established a political base of support such as the grass roots support that exists in many places for agricultural research and extension. Expecting the research and extension establishment to switch abruptly and predominantly to rural development is as naive as expecting McDonalds to switch overnight from hamburgers to pizza."

See Youmans letter (4/28/78): "Certainly the system is dominated in the West by food and fiber concerns and it should be. Agriculture is very important to the local rural economics and to the Nation, but there needs to be increased voice about the non-farm issues in the rural setting. The problem is not one of decreasing the absolute concern of food and fiber, but in adding significant political voice on other concerns. This is very difficult. Rural leadership in health, transportation, education, law enforcement and justice, civil engineering and public administration, local and state government have not been viewed or view themselves as prime clients for research from the rural portion of the Land Grant University system. In fact, we generally find ourselves competing at all levels of government for budget to maintain our existing programs in competition for budget with the very leaders from these identified program areas."

"* * * The benefits of health, transportation, public services, volunteer effectiveness, etc. are types of research that have broad benefits spread among many people and groups. The benefits accruing to any individual or group is insufficiently concentrated to stimulate them to spend the limited political muscle they have to ask for funding for an outside supporting research organization. The traditional clients of agricultural research don't have this problem. The cattlemen know, the wheat growers know, timber producers know that they benefit enough individually that they can effectively lobby elsewhere for support for the research."

See Eberts letter (4/28/78): "* * * USDA and the Land Grant Colleges and Universities have traditionally promulgated much research in support of producing more agricultural product per acre. * * * This system has produced innovations for food productivity which have consistently surpassed all expectations. * * * Indeed, in the face of the greater productivity, almost one-half of all farmers and nearly one-third of all agricultural land were removed from agriculture each decade for the past three-quarters of a century. * * * Those who remained behind in rural localities showed greater poverty and debilitation levels than people in other U.S. localities.

"A major issue is that the Land Grant Universities have spent billions in producing the agricultural technology, but have spent next to nothing in analyzing and attempting to change the social and economic system into which the agricultural technologies are being delivered.

"* * * Because firms like Kraft, Borden, National Dairy, Swift, Armour, National with, they can operate in particularly oligopolistic fashion to buy out and then shut down local producers and processors, and then sell their own products through relatively oligopolistic supermarkets in nearly any given area. In some ways, these 'efficiencies' do produce lower cost food. But in many ways, they stagger local economics so that people in these local economics are no longer the entrepreneurs which made America great, but the employees of the great corporations: they exist to implement the computerized programs of the corporations at the local level.

"* * * What is missing from agricultural research and which is relevant to rural development research, therefore, is the analysis of how people in rural localities can take advantage of 'missed economic opportunities in agriculture.'"

See Schickele letter (5/25/78): "* * * The USDA-Land Grant College-Extension Service System is, on the whole, strong and effective, but serving mainly relatively large, highly commercialized farmers. As far as I know, very little attention is given to the small-scale or part-time farm families, or to the serious problems of part-time and migrant farm workers' families, or to the crucially important interrelations between farm and town people within the context of the integral socio-economic setting of the rural countryside. It is this comprehensive and complex rural setting which requires most urgently an effective rural development research program. To this end, it will be necessary to co-opt the interest, expertise and resources of local, as well as state governments. This need is particularly urgent in those high productive farming areas where the large corporations are displacing farm families and resident farm workers, with serious harm inflicted upon rural towns and the displaced farm workers and their families."

2. If so, what can be expected for future rural development research?

Comment: Many who responded identified areas of research oversight. These oversight areas are identified below as collected from the letters and statements submitted to the subcommittee.

A systematic review of research for extension are presented on Christensen's statement (with letter 4/18/78). In addition, the Christensen statement includes a document illustrating rural development research priorities in the four regions of the country. (See Appendix to statement), water, sanitation and health, transportation, hospitals and clinics, contagious diseases, cooperation and energy are listed as areas of research need.

Another treatment of rural needs and research priorities is reflected in Fujimoto and Zone's "Sources of Inequities in Rural America: Implication for Rural Community Development and Research." (See Fujimoto Materials, 4/21/78).

See Pigg (4/28/78): "There is a continuing and growing need for research in a wide variety of subject areas." * * * Even when this research is completed, there will remain a tremendous number of needs, because this is research completed at a high level of generality, not often accepted as valid in rural communities. As noted earlier, the knowledge that is needed is of two kinds: generalizable and locality specific. Problems which are seen as suitable for research acceptable within a professional discipline (due to the prospects for generalization) will continue to be done by university faculty members. The locality specific information needs will mostly be ignored. Extension staff have been sensitive to these needs, and techniques have been developed which will provide for the development of the necessary information. However, due to the personnel shortages, as well as the lack of firm continuing administrative support at all levels for rural development activities, the need cannot be adequately served.

The lack of emphasis on rural development research is not difficult to understand. When placed in competition with the other program missions of the Colleges of Agriculture, rural development often has the lowest priority. There are several reasons. As noted earlier, this is often considered "high risk" research; its "payoff" is often questionable, the research itself is often costly, and often requires a great deal of time. Another reason is that rural development in the Land-Grant system does not have the organized constituency that other program areas enjoy.

How can these problems be effectively addressed? The funding for section 603 of the RDA-72, provided for the first time this year, is perhaps one way of encouraging research in rural development which is applicable and useful. However, the funding is insufficient to have much impact, and the criteria for gaining access to these funds will not allow many crucial needs to be met. Again, greater accountability for existing funding can be demanded by Federal agencies in a manner that will raise the priority ranking of rural development. Present Title V funding could be arranged to support locality specific research needs identified by local rural communities, rather than university researchers. Other similar procedures could be established, that would increase the emphasis placed on rural development research and insure relevance and utility."

See Eberts letter (4/28/78): "In summary, regarding prospects of rural development research and extension in the more rural counties, the first fact is that people in rural areas seem to be becoming better off at a slower rate than those in the more urban or metropolitan localities. This fact in itself should be monitored through appropriate research projects for its implications over time and into the future. A second fact is that most federal and state government programs do ameliorate the conditions of life for people in these rural localities—they do actually have their proper effects when and if they are implemented, even if from time to time the programs are not quite as cost effective or cost beneficial as they might be. * * * A third fact is that these programs are implemented in rural localities with less frequency and intensity than they are in the more urban and metropolitan localities. Much further research is necessary to discover the specific reasons for this failure of rural localities in accessing the federal and state programs. * * * A fourth is that it is possible to create the expertise in governmental units in rural localities which have the capability both to assess the federal and state programs and to demonstrate to the local populations that such programs are beneficial and not to be eschewed. There is little systematic evidence on this in the U.S. * * * Further research is certainly needed on this aspect of rural development, and once established should be monitored in order to ascertain the continued effectiveness of such organizations . . . a major conclusion of present research is that more urban, suburban, and metropolitan counties have these development planning and implementation units in place, whereas most rural localities do not, so that the rural localities will 'naturally' not be able to take advantage of federal and state programs and of local conditions to develop as fast as the other types of places."

Policy

Initially see comments under section I which establish a policy context by drawing attention to the need for an overreaching orientation to rural development.

See Zimmerman letter (5/1/78): "There is great need for research that addresses policy and programmatic issues relating to rural residents."

See Faux letter (4/18/78): "What are the implicit or explicit strategies, if any, for rural development upon which current and proposed nonfarm research is based?" "* * * Without a strategic context, the pieces of research do not build on each other and tend to be isolated and of limited use."

See Grissom letter (4/22/78): "*Non-farm rural development* implies the existence of another category such as agricultural development. And *rural development* suggests a distinction from urban development. These are false distinctions which blind us to the obvious causal connections between town and country problems, and between agricultural development and the deterioration of family stability, local institutions, and our natural resources."

See Wheelock letter (4/25/78) on a policy which fosters out migration: "One unfortunate means of implementing rural development subscribed to by some local levels is the reduction of rural poverty through encouraging outmigration of the poor."

See Fiske letter (4/27/78), including comments on a proposed abstract: "The emphasis of our proposal is clearly on Rural Development from a unified, as contrasted with the traditional fragmented, perspective."

Quality of Life Research

See Stuby article enclosed below:

"* * * no one has been successful in coordination and unifying quality of life research to yield a comfortable accumulation of knowledge under the bibliographic heading of 'Quality of Life.'"

See Eberts letter (4/28/78): "The unevenness or inequality of development in rural localities is a serious problem in the U.S. It is particularly serious because some research has indicated the nature of the problems, so that directions for amelioration of the conditions are reasonably clear. Research is necessary in order to monitor the conditions, as well as to continually check the major hypotheses of what can be done to ameliorate the conditions, in order to assure that the more effective programs are being implemented. Part of the problem deals with the integration of agricultural research into rural development programs. Part of the problem stems from the inefficacies of people in rural localities to utilize appropriate federal and state government programs and/or to take advantage of missed opportunities in local conditions. In general, the better-off localities utilize such programs much more effectively than the worse-off localities, so that present inequities are exacerbated rather than ameliorated by federal and state programs."

Small Farm Research

See Chapman and Goss paper following letter (5/26/78): "The Census has a record of continually underestimating farms, particularly small farms. An evaluation of 1969 Census revealed that between 35 and 40 percent of all farms with gross sales less than $2,500 were not counted."

"There is little concensus on the definition of small farm. * * *" "There is a tendency in small farm policy discussion to confuse the terms 'small farm' and 'family farm.'" "There is a high degree of overlap between small farms and part-time farms."

See Powers, Gilbert and Buttel paper following letter (4/14/78): "* * * there is no universally accepted definition of a small farm operator."

Housing Stock and Water Supply

See Bond letter (5/4/78): "What is being done to reduce actual costs of housing for people in either of these categories, other than low-interest loans?

Some of our research concerns are: a. How can rural homes be built cheaper? b. How can rural people use their own labor, or build a house themselves from adequate self-help plans? c. How can costs be reduced in rural homes? d. Can rural homes use solar, wind energy, or other methods to reduce fossil fuel consumption and cost? e. What alternate methods of waste disposal (alternate to septic tanks that might not work on their land) are available for rural areas? f. Is the drinking water supply safe and adequate in rural areas, and how can we insure that it is?"

"* * * I feel that housing in rural areas, whether it be non-farm or farm, has unique aspects that differentiate it from urban housing. Some of these differences are: a. Many solar, wind, and other alternative energy sources can be utilized in rural areas that would not be accepted (aesthetically or by building codes) in urban areas. b. There is a need and usefulness for alternative waste disposal systems in the rural areas (both individual homes and communities) that is non-existent in urban areas. c. Water supply systems in rural areas are notoriously unhealthy (see attached NRP No. 20690). Such systems, whether for single residences or rural communities, are outside the realm of urban problems."

See Zippert Statement (5/5/78): * * * "Rural residents, especially minorities and the poor, have traditionally encountered much difficulty in obtaining mortgage credit for housing. Research should focus on ways to solve the problem of credit availability for those rural residents who have existed at an economic disadvantage."

Health

See Grissom letter (4/22/78) for statement on health in its broadest context: "*Health*, of the land, of the people who tend it, and of the people who live off of its bounty, should become the goal of all agricultural research."

See Wheelock letter and materials (4/25/78): "One unfortunate means of implementing rural development subscribed to by some at local levels is the reduction of rural poverty through encouraging outmigration of the poor. This attitude may have perverse effects upon health of rural poor which only compounds the poverty problem. Our research on rural health, implementation of school lunch and breakfast programs, and infant mortality, still suggests that the poor in rural areas need continued leverage from federal legislation."

Rural Industrialization and Employment

Comment: Many who testified made reference to the fact that small farm research and subsequent advocacy for small farm viability could lead directly to reduce rural unemployment. See materials pertaining to the farm, in non-farm research definition referral above.

See Faux letter (4/18/78).

See Fujimoto materials (4/19/78).

See Wheelock letter (4/25/78): "In our Department's work with rural Alabama communities in planning for an integrated approach to job creation, job training and job placement, the agricultural potential for the area plays a big part."

See Pigg statement (4/28/78): "For example, we are seeing a rather large volume of research now assembled on rural industrialization and its impacts on rural communities. Similarly, the number of studies of energy plant sitings is growing. However, we know little of real significance regarding the impacts of tourist industries on local areas. In Kentucky, where tourism is annually a one billion dollar industry, we need to know how to best assist rural communities in planning ways to deal with the related impacts, but we do not know very much, and the planning is haphazard and risky at present."

See Zippert statement (5/5/78).

See Maund letter (5/31/78): "Many small rural cities, especially in the South, are experiencing substantial growth. Research needs to be conducted and disseminated on the impact of growth on rural areas and how small cities have handled the resulting problems. Of special concern in this regard, would be the provision of housing alternatives for those that cannot afford conventional housing."

Locality Specific Research

See Pigg statement (4/28/78): "Such research could explore community attitudes and knowledge about potential social changes, determine probable acceptance, and monitor adoption factors during early years of the innovation."

See Eberts letter (4/28/78): "If rural localities are to be revitalized with the "rural American spirit" of self-confidence, self-sufficiency and self-fulfillment, it seems evident that some types of research along these lines should be undertaken and the results widely disseminated to local people. Market forces at both the national local levels are now so complex that it is hardly possible for any given entrepreneur to have the technical expertise to understand, no less monitor, the problems and processes."

Institutional Obstacles to Development

See Faux letter (4/18/78): "Finally, the Department should be pressed on research into the institutional obstacles to development. Monopolistic land ownership patterns, real estate speculation, education oriented to urban values, lack of confidence, are some of the obstacles that everyone who had attempted rural development has run into. If these are important obstacles to development, then they should have a priority in the Department's research."

See Eberts letter (4/28/78): "So much of present agricultural research is geared to viewing the individual farm as the primary unit of agricultural activity that whole sets of activities are overlooked—specifically the chain of local producer, selling to local processor, selling to local distributors, selling to local people. Most agricultural research is geared to studying productivity within specific crop products—milk per cow, wheat per acre, corn per acre, soybeans per acre, etc. Little attention is paid to the mix of agricultural products which is optimal or even economically possible in any given locality. Most localities can support some local vegetable farms, dairy farms, orchards, and so forth, but analyses of the types and numbers of such farms are lacking."

Energy

See Pigg statement (4/28/78): "In Kentucky, the national demand for energy has increased the scale of coal mining operations dramatically. Since this is a non-renewable resource, the future economic and social health of the coal areas is open to serious questions. What is likely to happen when the coal runs out? How many people are likely to move? How can we mitigate the effects of the demise of coal? How can we better use present benefits from coal exploitation to assure a solid future for families and communities?"

See Bond letter (5/4/78).

See Zippert statement (5/5/78): "Research must thus be directed at developing alternative renewable energy sources which are not only cheaper than traditional sources, but also indigenous to rural communities." "* * * Energy costs not only impact on housing, but also in industry and transportation. Research needs to be directed at the impact of rising energy costs on industrial location in rural areas. That is, we need to know whether rising energy costs have encouraged or discouraged industries in non-metropolitan areas." "* * * With the advent of rising energy costs and a growing reliance upon more sophisticated machinery and equipment, there exists an urgent need for research in technologies which requires small amounts of capital and use cheap renewable community-based materials and fuels."

Demographic Materials

See Pigg (4/28/78): "Another need concerns the reasons for and characteristics of return migration to rural communities. We are seeing more of this literature, but we still need to know their characteristics, local family ties, impact on community services, demands for housing, etc. Without this information community planning is reactionary."

See Allen (5/12/78): "Farmworkers have so infrequently been included in research projects of rural America, that they are still at the basic stage of needing statistically accurate of their numbers, racial composition, and patterns of settlement and employment." "* * * Future research and extension projects aimed at advancement of farmworker interests will have to find its base in this type of statistical information and once these statistics are compiled the problemmatic areas can be more easily defined."

See Threatt letter (6/1/78): "In order to ascertain the needs of rural women, to evaluate research efforts and to put valuable findings to work, a sound data base must be established. Incredibly, such a data base currently is nonexistent."

Federal Outlays

See Wheelock letter (4/25/78): "Our research on rural health, implementation of school lunch and breakfast programs, and infant mortality, still suggests that the poor in rural areas need continued leverage from federal legislation."

Land Use and Ownership

See Faux letter (4/18/78): "Another strategic question centers around land use and land abuse. Rural states and rural districts are often woefully ignorant of ways of developing economically sound development systems and of seriously *researching claims and* counterclaims on the issue of jobs versus the environment. It is worth noting, for example, that economic criteria are almost totally missing in that debate, which means that unrealistic claims of job generating potential of one investment or another become factored into the decision-making process."

See Bossi letter (4/25/78): "Finally, the USDA research system has been grossly negligent in examining the connection between changes in the structure of ownership of rural resources and the well being of rural communities. The ownership of farm land, for example, has been approached as a purely farm question without consideration of its consequences for the whole rural community. This is a further reflection of the disciplinary specialization which seems to be inherent in the current research structure. There is an urgent need for some in-depth analysis of how the ownership of rural resources, farmland, timber, energy reserves, etc., is changing and how the consequent changes in the flow of earnings from those resources is impacting on rural community life."

Rural Credit Unions

See Zippert statement (5/5/78): "Lending institutions such as banks, FmHA and savings and loans have not been very receptive to the poor and minorities who want to borrow money for whatever reason. These neglected are generally left with no other institutions to which they can turn for loans. The result has been unrepaired houses, under-capitalized farms, poor health services, and undeveloped and under-developed small businesses—to mention but a few. The only recourse is for these people to collectively form their own credit union in order that they may obtain the financing and capital they need. Research is needed to determine the optimum number of members as well as minimum capital base these credit unions must have in order to provide badly needed service to their low-income members as well as to remain in business. There is also a need for research in the areas of minimum membership contribution and dividends payable."

3. What can be done to increase the concern for rural development research at the federal and state levels?

See Patton letter (4/10/78): We do not need more research for knowledge about the terrible lack of decent water supplies, sewer systems, health delivery inadequacies, housing, worse than urban—very bad transportation. We need people in our educational institutions who will teach a philosophy of rural living and what needs to be done to create a high quality of living for people who live in rural areas."

See Zimmerman statement (5/1/78): "* * * we do not believe that a single research approach can meet the needs of rural people, particularly non-farm people. Past USDA-sponsored research has, indeed, been heavily farm-oriented. In addition, questions of technology have been explored far more than policy questions. There is a great need for research that addresses policy and programmatic issues relating to rural residents. The problems of non-farm rural people are usually not technical but institutional in nature. They often lack basic services—such as adequate housing, water and sewer facilities, and transportation—not because the technology for delivering these services is unavailable but because the institutions that make up the delivery system do not function as well as they should for rural people. Research to evaluate policies, to demonstrate successful management models, and to test program techniques is badly needed. This kind of research can be more readily translated into policies that benefit rural people than technical research, although the continuation of the latter is obviously important."

See Fiske (4/27/78), Proposal Abstract.

B. Projections for rural development research: (1) Will they and can they be met and (2) should they be greater?

Comment: Specific answers for this question in terms of projected staff and research activity outlays were requested of USDA administrators during the hearings. (See Hearing Record). From written correspondence, a wide variety of reactions to this question were presented.

See Grissom letter (4/22/78): "* * * If, on the other hand, USDA is encouraged to pursue new objectives in rural development research without first confronting its own involvement in the creation of these problems, it is unlikely that these efforts will bear any fruit. Indeed, it appears that we would be guilty of reinforcing the inadequacy of previous research and development efforts by allowing researchers to derive a livelihood from studying the negative consequences of their earlier works."

See Sinclair, et al. letter (4/24/78): "There are additional problem areas (rural development) in which we could and would like to expand our research activities. However, it would be impossible to do so without additional funding and personnel."

See Wheelock letter (4/25/78) on threats to funding services.

See Ward letter (4/26/78) concerning the conflict between information generated by small costs versus large scale agricultural research.

See Fiske reference (4/27/78) to paper by Fiske and Zone (see bibliography).

See Madden letter (4/27/78). Having emphasized the continued food and fiber research focus, and its importance, Madden notes that, "we can still argue that more and better work needs to be done on rural development." Having reviewed the Title V rural development programs of all 50 states and Puerto Rico, I have concluded that:

(1) It is indeed possible for a land grant university to mobilize and integrate their research and extension resources to help rural communities identify and solve their own problems.

(2) * * * for Madden's second conclusion see Section III. B.2. "New and Different Structures."

(3) "The nation's land grant universities should receive a substantial increase in funding for Title V activity. But the expansion should be done carefully, subject to successful readings from a scientifically credible evaluation, with close attention to the lessons of the past and with thoroughly integrated research and extension efforts. Evaluation should focus on the *processes* initiated by the universities toward helping the rural communities achieve greater capacity to identify and solve their problems—short term "quicky" projects should not be encouraged to the exclusion of long term projects."

(4) Multiple-year funding commitments, should be offered so that long-term commitments may be made to attract and retain top quality professional research and extension personnel. Given the degree of success demonstrated in the previous four years, rural development researchers, extension specialists and administrators throughout the nation were simply staggered by the 1979 Executive Budget, calling for a zero budget for Title V. I know faculty and graduate students who read this phenomenon as an indication that the Carter Administration had decided that rural development was not going to continue to be supported by the federal government. Some have changed their career plans, away prospects for continued funding. This kind of funding uncertainty undermines the rhetoric of officials who claim rural development research and extension are important and should be expanded."

(5) For Madden's fifth conclusion, see comments under Section III. A., "Examination of application of present research to rural situations."

See Vande Berg letter (5/5/78): "Yes, we do need additional research, but more than that, we need to get rural non-farm communities and people directly and purposefully involved in the needs identification and application of what is already known to those needs * * * need to systematically involve local people as the key to make use (1) of their own talents and local resources, and (2) of federal and state resources appropriate to their needs and problems."

See Meyer, letter (5/31/78): "Please, Senator, let us not spend millions more for researching rural problems. Research materials lay floor to ceiling in offices like Rural America, Rural Advancement and others. What this nation needs now is some action. The research funds suggested would only go to the same institutions that get most of the Federal research funds anyway—the Land Grant College and University System—and they have not done anything of real value to correct matters. Take a hard look at rural education and try to find any real data of consequence. There is none! Many small colleges and institutions across this country could make important contributions to the problems affecting rural people—but they stand virtually no chance because of the unholy alliance of USDA-LGGU-Extension Service."

C. Composition of the various research priority committees

See Grissom letter (4/22/78): "Without denying the abundant productivity and per man efficiency of American agriculture, one still must acknowledge the private and public policies which fostered this success have also encouraged unemployment, overcrowded cities, dependence upon scarce non-renewable resources, deterioration of the farmer's relative economic condition, serious losses of top soil through erosion, degraded standards of water. * * * Excessive reliance on orthodox measures of value is the by-product of a self-perpetuating professional research elite that operates without a system of accountability or checks and balances. Much USDA and land grant research escapes the process of peer review and replication which are the keys to responsible scholarship. Research needs are prioritized and translated into funded projects without adequate participation and review by private university scholars, experts from a sufficiently broad range of academic disciplines, or experienced, knowledgeable citizens of rural America."

Also see case materials presented with Grissom letter (4/22/78).

1. Representation of rural development researchers

See Faux letter (4/18/78).

See Fujimoto letter (4/19/78): "Some of the topics motivated me to undertake research while at the University of California, Davis. I was struck by the interests of a number of different publics—small farmers, cooperatives, farmworkers, urban agriculturalists, groups raising questions about more equitable and accountable ways of land and water use—were low or not even on the agenda as targets of concern for land grant college research."

Also See Fujimoto list of sources and the bibliography for documentation on the exclusion of the alternative agriculture movement, especially, Fujimoto's "The Movement for an Ecological Agriculture and Appropriate Technology," materials from the National Center for Appropriate Technology, and Esbenshade's "Farming Sources for a Social and Ecologically Accountable Agriculture." (Although these materials were submitted, unfortunately most were too voluminous for this record and may be obtained from the sources listed in the bibliography.)

2. The need for non-government, non-university representatives of rural people and communities

See Fujimoto letter (4/19/78) and bibliography; especially materials presented at a Conference: "The People and the University."

See Zimmerman statement (5/1/78).

See Grissom letter (4/22/78): "* * * It is important to understand that the USDA and Land Grant system is a vast professional network. Research monies are necessary to attract and employ graduate students and purchase expensive laboratory equipment. In turn, these students graduate, become teachers and/or researchers and require more funds with which to attract students and fully utilize their laboratory resources.

"This phenomenon, in a relatively short period of time, has resulted in a sizable interest group totally dependent on the taxpayer for its livelihood. These professional researchers presently request public funds utilizing a formula tied to gross agricultural sales as though it were their right to a guaranteed minimum wage. The work of these researchers has come to reflect *their* concerns, interests, and skills rather than the needs of any identifiable public constituency."

See Wheelock letter (4/25/78): "All of these "non-agricultural rural development" concerns invariably relate back to, if not enhance the cause for agriculture or human nutrition research and extension education. I feel applied agriculture research, with its storehouse of knowledge and new but underutilized technology, can only profit from closer communication between universities and local communities."

See Fiske letter (4/27/78) which reintroduces the materials cited by Fujimoto (4/19/78). Also see bibliography.

See Zippert (5/5/78): "The time is long overdue for research on the effectiveness of researchers as well as the extension officers themselves. * * * We believe it long overdue for the extension service to reevaluate the constituency it was initially established to serve and determine whether or not its goals are being met. We can document many cases across the Southeast where farmers and non-farmers have *never* seen the county agent in spite of repeated solicitations for assistance. We cannot comprehend how a certain county in the Black

Belt of Alabama is selected as one of the most progressive counties in the state as far as rural development is concerned when the vast majority of its Black residents who make up over half of its population is subsisting perilously close to the poverty level. It is because of the general unresponsiveness of the extension service to the relevant rural development needs of our constituency why organizations like the Federation must assume a leadership role in the betterment of the quality of rural life."

If the results are not relayed to rural residents for their use and application, the effort may be regarded as futile. The Federation believes this to be a major defect in rural research. It seems as though research and its findings have been the domain of only a select few as the masses have generally been excluded.

To counter this, we believe that research is too important to be left solely to researchers. There must be a greater community involvement in the issues selected, the way the research is conducted and the dissemination of pertinent results. This means that local communities should be involved all the way in the decision-making process. The extension system should have a contact person in every significant population locality to ensure that the research is being with that community's interest at heart. Information distribution should not be left only up to the county agent and his extension staff, but should also be done by schools, churches, civic bodies, and community organizations.

See Allen (5/12/78): "The extension and research service has not adequately established communication and contact with the minority community."

"* * * An examination of the states having large farmworker populations reveals that there has been only one Title V project which was actually aimed at helping farmworkers."

"* * * We would recommend a complete examination on both the state and national level of the projects which have been carried out, to examine their responsiveness to the minority communities. Renewed efforts must be made to seek minority representation on the decision making committees in order to assure their future equal participation."

D. Examples of inability of researchers concerned with rural development research to receive funding and support from USDA and the universities

See Fujimoto materials, referred with letter (4/19/78): "* * * The interests of a number of different publics—small farmers, cooperatives, farmworkers, urban agriculturalists, groups having questions about more equitable and accountable ways of land and water use—were low or not even on the agenda as targets of concern for land grant college research."

See Wheelock letter (4/25/78): "It is my experience that this style of research (involvement of local communities) falls between extension and research as perceived by many authorities and receives little support from either. In fact, development of new research constituents (community) may be perceived as a major threat to the already diminished funding sources of traditional styles of agricultural research and extension. Thus, research of this nature is not likely to receive support without separate authorization and funding such as through the Rural Development Act."

See Bossi letter (4/25/78): "A second concern is the need for greater involvement of non-land grant university participation in USDA supported rural research. This was authorized in the Rural Development Act of 1972 but, to my knowledge, has not been widely implemented. There is a great need to link rural development research with other disciplines which are frequently not well represented within the land grant universities. Perhaps greater support should be given to contracting with non-institutional research entities which can make interdisciplinary linkages without the political constraints of the university system. These are possibilities which deserve greater attention."

1. Rigidity within the Land Grant System which prohibits certain rural issues from surfacing—suppressed research.

See Sinclair et al. letter (4/24/78): "We have seen no evidence of "suppression" of legitimate research proposals in rural development in the Northeast. With limited resources, poorly developed or lower priority research proposals cannot, and should not, be financed."

See Madden letter (4/27/78): "In my ten years as a professor at a land grant university, and with extensive contacts nationwide, I can recall *no instance* in which the finding of well designed and professionally executed research (that has been properly documented and well written) has been suppressed, regardless of its subject matter. The only cases in which reports have been suppressed have been manuscripts that failed to meet conventional standards of scientific quality—false inferences of causality, invalid data, failure to document conclusions—in general, fuzzy thinking, non-scientific, pseudo research. Researchers *as citizens* have the right to publish anything they wish, including unscientific and non-documented speculations and opinions. Hundreds of publishing companies are willing to publish anything as long as the author will pay the cost of publication. However, *as a researcher*, if one wishes to publish a manuscript which will carry the credibility of a scientific report, it must pass certain standards of validity, rigor and objectivity. If by "suppressed research" you refer to the quality control procedures followed by professional refereed journals and experiment station bulletin editors, I would agree that such suppression does exist and should continue. Researchers should continue to be required to document the scientific processes used; they must rigorously present the findings in a way that makes the line of reasoning repeatable. Unless professional standards continue to be imposed on researchers, their writings and their expertise will be of no more value than those of any other person. And in my opinion, society would be deprived of the keys needed to unlock the mysteries of rural development. Therefore, I hope certain kinds of "research" will continue to be suppressed—the kind that fails to meet the standards of professional excellence. There is no reason that rural development research or any other applied research should be less scientifically valid than research done in any other field."

See Youmans letter (4/28/78): "I am sure that certain rural issues have been suppressed across the country from research attention, but I don't believe very many are suppressed for political or philosophical reasons. In fact; I would assert that a larger amount of non-food, non-fiber research is "boot-legged" in the agricultural establishment than is suppressed. The reason for this "boot-legging" is to secure funding. The administrators are willing, but funding is insecure and difficult to find. It has been difficult to secure solid funding for the research that is now being recognized as a major concern in rural areas of the country. The sustained research support is threatened everywhere. Under such conditions it is difficult to convince administrators that they have the flexibility to free funds for research with no visible clientele that will politically support this type of effort."

II. E. Title V. Research.—When these hearings were first designed, an attempt was made to avoid prolonged attention upon any research emergency from a specific Act of Congress. We were afraid that to do so would orient the hearings toward such detail that many of the larger issues would be lost. However, one specific activity, Title V of the 1972 Rural Development Act, was raised so many times during Hearings activities that comments as to its impact can not be ignored. Title V stands as the ony significant program activity at USDA to bridge the oft-noted gap between research and extension.

Discussion and Evaluation of Title V.

See Testimony from the hearings by last panelists.

See Cornman letter (2/14/78): Cornman outlines the key source material from the National Rural Center which deals with Title V. These materials (available from the National Rural Center) are listed in the Bibliography under, Cornman, Madden, and McIntyre respectively.

See Christensen letter (4/18/78): "It is true in some states this (Rural Development) has had a slow beginning and it has been difficult to get research that took a look at the non-agricultural aspects of the rural areas. Nevertheless, this has changed drastically over the last few years. It has especially changed since the Rural Development Centers have been established through funding from Title V of the 1972 Rural Development Act. These Centers have all been involved in identifying research needs and have begun to play a real catalytic kind of role in getting the kind of research done that is needed.

"Here in California Title V has proven to be very valuable to us because it made it possible for us to attack problems in a different way than we have in the past. By requiring that funding be used for new and innovative programs, that it be a combination of research and extension activity, it has been a catalyst for us to involve a number of faculty members in what we feel is a very productive program."

See Madden letter (4/27/78) and bibliography.

Madden's letter makes explicit the ties between rural development legislation intent (as embodied in the Rural Development Act of 1972) and one title, (V) of that Act: "The evaluation (of Title V) was done in cooperation with USDA and the National Rural Center. It was not possible within the scope of that study to conduct a rigorous evaluation of each state's Title V program. Rather, it was an evaluation of the law—an examination of all the state programs to ascertain whether the idea underlying the legislation is inherently workable. As discussed in the attached reports, the basic idea of Title V seems viable, provided sufficient funding is allocated and effective administrative structures and procedures are utilized by the institutions of higher learning." For further details see Madden letter (4/27/78), where the implications of Title V induced research and extension are presented.

See Youmans letter (4/28/78): "In the Western United States, Title V of the Rural Development Act of 1972 gave a great boost in legitimatization and funding to non-food—non-fiber, although the funding was most important. The people did not need to be identified and recruited when this effort started. They were already in place. These soft funds could secure larger amounts of these people who are already in place and could extract their time from other activities to focus on nonfarm rural research and education. The numbers may not be large, but most people have found administrators supportive of their interest in non-farm research, but too frequently not able to identify funds to support the effort."

See Kuennen letter and materials on Title V in Delaware (5/3/78).

See Zippert (5/5/78): "One remedy for the Rural Development problems listed above lies in the expanded implementation of the authority in Title V of the Rural Development Act for involving non-Land Grant institutions in rural research. Expanding the group of eligible institutions, including non-traditional community based non-profit organizations, that could qualify to receive Federal research support will increase the scope, quality and responsiveness of farm and non-farm rural research."

See Linder (5/10/78): "Restoring the Title V appropriation to the Rural Development Act legislation should be implemented. The recommendation made by the National Association of State Universities and Land-Grant Colleges should be used as a guideline. They are recommending $5 million for Section 502(a) and $4 million for Section 502(b) of the Rural Development Act of 1972 for FY 1979. Additionally, restoration of funds for the PL 89-106 program which included $300,000 for the regional Rural Development Centers should be implemented:

"The grass root audience affected by Title V is the 67 million people living in rural America. This population encompasses 17,500 communities."

Add to this number the continuing stream of urbanites who have become disillusioned by the big city and are now moving to rural America at a rate of 380,000 per year. A 1970 survey of people living in metropolitan areas, found that 65 percent said, "I want to get to the rural life."

It was also in 1970 that construction was 3½ times higher in rural America, manufacturing growth became 2 times greater, and the wage gap between rural and city began to close.

These figures make us proud. But, this growth needs guidance. Title V is pointing the way to a better life. Without Title V, we could import all the problems of the big city.

III. APPLICABILITY AND AVAILABILITY OF RESEARCH TO RURAL PEOPLE—ISSUES OF ACCESS AND USEFULNESS

A. Examination of application of present research to rural situations

See testimony from the actual hearings. Especially see statements by French, Fields and Navarro.

See Christensen statement (with letter, 4/18/78): "The research base for community development has only in a small degree been established as firmly as that undergirding agricultural and home sciences."

Also see Christensen statement for identification of types of research needed in extension (with letter 4/18/78).

See Fujimoto letter and materials (4/19/78).

See Grissom letter (4/22/78): "The dissemination of research conclusions is most often limited to in-house USDA publications with limited readerships and agricultural magazines which often depend upon commercial advertisers rather than paying subscribers for their financial support. (Five different agricultural publications are sent to me each month, free of charge, and full of answers to questions I have not asked and replete with solutions to problems that are not mine. In most cases the journals' advertisers are in the business of selling the solutions to the problem identified by the authors of the accompanying articles.)"

See Ward letter (4/26/78): "* * * it is also important to define the clientele for information on rural development."

See Madden letter (4/27/78): "One common feature of all the successful Title V programs is that their research efforts were 'applicable' (as mentioned in your outline) to rural development concerns." For detailed examples see the letter.

Also from Madden letter (4/27/78): "* * * I feel that your section III on 'Applicability and Availability of Research to Rural People' places too much of the blame on extension. I am a researcher, and I will assure you that when research and extension fail to get their act together, this is as much the fault of one as the other. And perhaps even more to blame are the administrators and the professional rewards systems which sometimes discourage integration of research and extension."

Also from Madden letter (4/27/78): "I cannot overstate the importance of *functionally integrating research and extension*. The law clearly distinguishes research from extension: their budget allocations are explicitly distinct. And in some states the two activities are almost like separate nations, each with its own language and its own currency. In the most successful rural development programs, however, we find research and extension working hand in hand. Often the same person will receive some of his or her salary and other support from Title V research monies, and some from Title V extension—a joint research and extension appointment. This arrangement is obviously conducive to an integrated research and extension program. In other cases, effective integration has been achieved through team efforts by two or more persons determined to work effectively together to solve a superordinate problem. Of paramount importance is having an administrative structure and reward system (for pay raises, promotion and tenure) which will encourage research to do their research problems relevant to the extension people who are attempting to facilitate rural development.

"Recent budget discussions seem to favor a larger share of Title V dollars for extension than for research, with a constant share going to each of the two activities. While this kind of mixture may be desirable in most locations, I would prefer to see the monies merged under the control of a single program administrator who would have the power (in consultation with appropriate state and local advisory bodies) to allocate funds flexibly in any combination of research and extension that would seem most promising as a way to attain the "essential process" for achieving rural development. As described fully in our policy statement, the essential process must be constructive, comprehensive, inclusive, and rational." (See the statement for a full discussion of this concept.)

See Clayton (5/1/78): "Although variation exists between the states, a considerable amount of "hands-on" Rural Development work has focused on organizing communities, identifying leaders, and so forth. Much of our Rural Development research, on the other hand, has lacked in application. Part of the problem has been a detachment by researchers from the clientele they are serving. Also to blame has been the failure of extension presonnel to improve the decision-making capabilities of rural clientele groups. It is my belief that the researcher must interact with his client groups. Moreover, simply delivering the decision-making capabilities of local leaders is likely to prove fruitless. This same type of problem is emerging in the several states where increasingly sophisticated clientele groups are emerging. We, in Florida, for example, are having increasing contact with local and regional planners who deal with Rural Development issues. These fellow professionals are looking for subject matter expertise from economists, sociologists, and others in the Land Grant System. As we provide them data and tools it becomes apparent that they, too, are in need of help in utilizing these inputs to the decision-processes with which they are involved. The lesson in all this, I believe, is that close coordination between research and extension is critical. Several states have recognized this by appointing faculty with joint research/extension appointments. While I am not sure that this type of arrangement applies in an analagous fashion to USDA Rural Development efforts, it might be an organizational arrangement worthy of consideration."

B. The role of Extension Service

See Fiske letter (4/27/78) and materials. A paper by Fiske, "Evaluation of Cooperative Extension Efforts at the County Level: The University of California Example" (see bibliography) examined California's county-level extension component; specifically focusing on Cooperative Extension specializations, budgets, and manpower and their "fit" with the social and agricultural conditions of the counties within which they are located. "The findings showed that cooperative Extension activities correlated quite positively with the 'modern rational agriculture' factor; they had almost no correlation with the 'traditional family farm' factor; and they had a strong *negative* correlation with the 'rural isolation and poverty' factor. These findings have major Rural Development policy implications for California."

See Pigg statement (4/28/78) which details the success of Extension Service in Kentucky. Pigg concludes: "It is my impression and opinion, therefore, that ample research information *is* serving non-farm rural people. Undoubtedly, we can do a better job. For instance, like other 'service' organizations, Extension does have difficulty reaching the 'hard-to-reach' with program benefits. However, the success of the EFNEP (Expanded Foods and Nutrition Education Project) program demonstrates what is needed to overcome some of the present obstacles: (1) more manpower in rural development program areas, and (2) more programmatic support for funds for Extension which are not tied to specified projects."

See VandeBerg (5/5/78): "Too many people feel that rural development is the providing of grants and loans for public facilities, housing, transportation, etc.! Those are only the tools. What is needed is the catalyst—the organizer—the motivator—the designer—the teacher—to help people in their own communities design their own plans with help from experts and then carry them out with the tools or resources at their disposal."

1. Lack of extension communication with non-farm rural people

See Faux letter (4/18/78): "Another strategic question deals with the need for greater self-sufficiency on the part of non-farm rural people to allow them to substitute goods and services produced through their own labor for the commercial goods and services whose prices have been inflated by the urban market. A key element in this, of course, is the creation of cooperation self-help systems. There have been a huge number of such systems attempted in the last-dozen years. And for the most part the Department of Agriculture has been indifferent or hostile. What have we learned from these efforts? What is the Department doing to disseminate what we have learned?"

See Eberts letter (4/28/78): "It is highly probable, that the next most important thing to happen in order to facilitate rural development in the most rural counties is to create greater professional and political planning capabilities in these localities. Experience and our data have shown that professional planning capabilities can and do impact on a variety of development activities in these localities. Such activities include everything from creating greater opportunities in the economic base of these localities to making available a greater variety and complexity of services to local populations. The professional staff should probably include not only individuals who are familiar with federal and state government programs, but also economists to advise on missed economic opportunities and to perform local feasibility studies, sociologists to assist in forming effective citizens' advisory committees on important public and private services, planners to coordinate the above and project activities into land based facilities, and an overall policy manager to coordinate all of the above activities into a coherent program.

"In some instances, professionals with these capabilities can be found in rural localities. Certainly the more urban of the rural counties have numerous individuals charged with such responsibilities. For the most part, however, these individuals seldom have a vision of the possibilities of the outcomes of their work, and they seldom have very highly developed skills in implementing their programs. Few have advanced degrees with highly specialized skills. Most suffer because rural political "climates" do not favor aggressiveness in seeking development strategies and processes. In any instance, rural development professionals might be well-served by In-Service Education Programs which could be organized through the Extension Service in order to maintain and/or increase their skills and capabilities in these mediating efforts between federal and state government programs and the people in their own localities."

2. Do we need new and different structures for dissemination of rural development research?

See Zimmerman statement (5/1/78): "NDWP, with considerable success, has focused on the special problems of areas with widely dispersed residents and small communities involving large numbers of low-income families. Under the control of a network of local organizations, NDWP has sought to combine model service activities with policy reform undertakings to improve nationally the means by which these rural people are able to obtain water and sewer services at reasonable prices they can afford to pay."

See Christensen letter (4/18/78): "* * * the land grant system can carry out the purpose of rural development and extension. The same structure that has been successful in agricultural and extension systems can be used to benefit the total rural areas. The biggest mistake we could make is to duplicate the extension system with other delivery mechanisms. If we are interested in financial efficiency and service to the local people we will adapt and use the system we have established rather than add new ones. There is no doubt that we can have an impact on helping to solving the problems in the rural areas."

See Sinclair, et al. letter (4/24/78): "We can see no compelling reason to establish a new bureaucracy within the USDA specifically to promote research or extension in rural development. Within what was formerly ERS, there are several divisions whose responsibility is in this area, and we have found these divisions to be responsive. Furthermore, this could lead to duplication of effort since there is a fair amount of complementarity between research related to the farm-food-fiber sectors and the nonfarm sectors."

See Madden letter (4/27/78): "I offer a mixed answer: (a) in some areas of the country, definitely no—the existing system has proven to be highly effective; and (b) in other locations, the jury is still out. The amounts of money allocated to the states through Title V, for example, were so small (averaging less than $50,000 a year per state) that ineffective programs could be justified simply on the grounds of non-support. Let us also recognize that an alternative delivery system is not likely to be created, nor if created would it receive the levels of support needed to make it work. For better or worse, the extension system—with its vast network of state and county offices—is the only system we can reasonably expect to have in the foreseeable future. The system has proven to be effective in regard to commercial agriculture. And in many states it has already demonstrated a high level of effectiveness in facilitating rural development—despite the shortages of funds and the relative newness of rural development as a priority goal. So I feel it is premature if not erroneous to say we need a new system. A more effective strategy is to build on the strengths and correct the weaknesses of the system that already exists. If we wait for a revolutionary new system, we may have to wait a very long time, and there is no guarantee it would work any better than the one we already have."

See Pigg statement (4/28/78): "Nevertheless, I see few alternatives to providing on-going general programmatic support for Extension rural development activities if they are to be effective eventually. What is also needed, then, is the development of alternative forms of accountability. One means is the more costly (perhaps) approach of employing personnel with specific Extension rural development responsibilities in rather small geographic areas. Another is to develop more sensitive evaluation techniques for program support which will satisfy the accountability needs. Such evaluation procedures should permit the negotiation of criteria for determining accountability and would approach rural development in holistic fashion."

Also see Pigg statement (4/28/78): "Since the Smith-Lever Act of 1914, which established the formal county Extension program within the Land-Grant system, a county agent has been given responsibility for a specific program area—agriculture, home economics, or 4-H. The institution of the EFNEP program in recent years has also been associated with the placement of that responsibility upon a specific agent working in a specific county or multi-county area. No such relationship has ever been established for rural development on a long-term basis—except for certain states where federal appropriations have been supplemented with state and local funding, and these positions are usually associated with fairly large geographic areas. Rural development could undoubtedly be hastened if the personnel were made available."

See Deere letter (5/2/78): which describes health institutions in Arkansas.

3. What rural people are not being serviced by the research and Extension efforts of the system?

See testimony at the hearings from French, Navarro, and Fields.

See Faux letter (4/18/78): "Other strategies relate to energy. How are rural people going to prepare themselves for the expected skyrocketing energy prices in the 1980's? Given the dependence of rural access on the automobile, what is being done to develop energy-saving transportation systems? What is the cooperative extension doing to equip people with strategic skills to prepare them for higher energy prices?"

See materials submitted by Fujimoto (4/19/78).

See Sinclair, et al. (4/24/78): "In Vermont, we believe that the Extension Service is committing a significant share of its efforts to the problems of nonfarm people and such work is expanding."

See Pigg statement (4/28/78) in success/and frustration in extending service to "hard to read" rural people in Kentucky.

4. Are the alternative forms of rural development being served by rural development research and extension? (e.g. Consumer cooperatives, alternative housing, health clinics).

See hearing record for overview presented by USDA.

See Cornman letter and materials (2/14/78) and Madden (4/2[illegible]78) for specific discussion of Title V projects.

See Faux (4/18/78) and Wheelock (4/25/78) for case materials concerning alternative forms.

See Fujimoto (4/19/78) and Fiske (4/27/78) for discussion of new alternatives.

See Pigg (4/28/78) for case materials. "Many rural development strategies presently go unexplored. Most of these fall in a category which might be labeled 'alternatives' or 'nontraditional.' Such approaches would include worker self-managed enterprises, alternative housing, individual or cluster water supplies or waste water treatment facilities managed centrally, and health maintenance organizations among others. Such innovative approaches are regarded skeptically by rural communities. We already know how difficult it is to secure individual adoption of innovative technologies; it is even more difficult to secure community acceptance for social innovations!"

See Bond letter (5/4/78) on movations in housing research and technology as a case—Clemson Rural Housing Research Unit.

C. How can more emphasis be placed on applicable research for rural development concerns?

Role of Research in policy and program formulation:

See Stuby article enclosed below.

1. "Social Research and Development of Limited Use to National Policymakers." GAO Report #HRD-77-34 April 4, 1977:

The results of social research and development, however, are generally limited to national policymakers because social research and development has been authorized in broad subject areas, for the most part to serve agencies and State and local governments; planning has been fragmented according to the organization of agency activities; the dissemination of results has been relatively ineffective and uncoordinated; and utilization has been hindered by factors such as inaccessibility of results.

2. "Finding Out How Programs are Working: Suggestions for Congressional Oversight." GAO Report #PAD-78-3:

This report outlines a process for planning and carrying out congressional oversight of programs. This process could be used by congressional committees to keep track of programs as they are carried out or changed in response to legislation. GAO's suggested process is designed to avoid pitfalls common in making program evaluations.

Lack of an overall Research Strategy. See Faux (4/18/78): "Without a strategic context, the pieces of research do not build on each other and tend to be isolated and of very limited use. Moreover, they do not perform their function of helping governments, individuals and community organizations at the state and local level to develop insights and knowledge that will help *them* make strategic choices about their future."

See Fujimoto letter and materials (4/21/78).

See Wheelock letter (4/25/78): "The research strategy which we think needs support nationwide, and one which we are trying to implement on a small scale with our limited resources, is the direct involvement of local communities in the research process—from design to analysis, to dissemination and utilization of research results. The partnership between the university and the local community benefits both. Many community leaders are graduates of our institutions and are pleased to develop more explicit community linkage. Their image of the university as a community resource is enhanced as they incorporate new community development skills into local government."

See Fiske (4/27/78), proposed abstract.

See Pigg (4/27/78): "Even more recently the Extension Service has witnessed the reduction of support for program development in preference for project funding, sometimes on a competitive basis. It is my feeling that this change was, in part, an attempt to maintain accountability. Nevertheless, it has a serious impact on all extension programs, and especially rural development programs. This is because of the nature of the benefits of rural development efforts. Since many of the important impacts of rural development are qualitative and experienced only in the long-term, it is difficult to demonstrate the beneficial impacts of the funds contributed in support of a project in a sufficiently timely manner to satisfy the funding agencies. Additionally, rural development consists of a broad range of programs in which influences (and benefits) are often diffuse, intangible, and unpredictable. All of this means that each rural development activity can only be partially accountable, thus making it somewhat difficult to mobilize legislative and executive support for rural development."

See Youmans letter (4/28/78): "There are people in groups who benefit from non-food and fiber research, who do know and care, but opportunities need to be created to get these local people, both in and out of government, to say that this research makes a difference. How can we pay for local citizens or government officials to get to Washington, D.C.? We seem totally unable to do this. Local people show up in Washington when the concern is grazing fees, allowable cut in timber, or water development, but their commodity groups or the equivalent pay their way.

"It may be that we need to hold 50 informal introductory sessions involving congressional delegations, some legislators, the governor, research directors and deans and local leaders to discuss what is going on and what is needed. This would include the need, the means and the support for research."

See Eberts letter (4/28/78): "Local rural entrepreneurs do need assistance from technical economic experts who often already exist in the Agricultural System but who at present are not paying attention to these problems at a theoretical level nor in terms of delivering information to appropriate individuals and organizations through the Extension Service. Thus, some potentially important opportunities for further rural development (in jobs, income, and variety of local products available) are missed by a great number of people in rural localities."

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In the course of conducting these Hearings, Senator Leahy and staff were encouraged by people with diverse research interests to consider a multitude of materials. In the preceding pages of this report, only those materials submitted to the committee which are not easily available are included. Many other materials were identified that are available. This bibliography has been constructed to provide a background of information for further work in the area of agricultural and development research.

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(NRC) NATIONAL RURAL CENTER,
Washington, D.C., February 14, 1978.

Senator PATRICK J. LEAHY,
Dirksen Senate Office Building,
Washington, D.C.

DEAR SENATOR LEAHY: When Congress added Title V to the Rural Development Act of 1972, it required the Department of Agriculture to provide for an evaluation of the effort to encourage the land grant institutions and other institutions of higher learning to cooperate in helping rural people attain development goals.

The National Rural Center, (NRC), a private, non-profit corporation, was selected to perform the evaluation and to prepare a separate policy implications statement based on the evaluation. Enclosed are copies of the executive summary of the evaluation and the complete policy statement, entitled *The Essential Process.*

The evaluation determined Title V was a viable concept and ought to be expanded carefully.

In *The Essential Process,* we went beyond suggesting ways Title V might be expanded carefully, and discussed the importance of creating a process, of which Title V is only one version. But, the process, no matter which version one chooses, can help give rural people the capacities needed to take full advantage of private and public resources to attain development goals. Thus, the policy statement should be read not only for what it says about Title V, but also for what it says about the importance of a process to implementing an effective rural development strategy.

In addition to the evaluation report and the policy implications statement, NRC also has published a *Directory of State Title V Rural Development Programs.* This directory lists projects by subject as well as by state. For example, if an individual wanted to learn of rural projects in health, transportation, sewage disposal, etc., he or she could find the names of people involved in such projects throughout the country.

If you would like a copy of the directory or of the full evaluation report, please contact Ms. Eleanor Alexander at our Washington office (331-0258).

So that you may know something more about NRC, I also have enclosed material describing our purpose and activities.

With best wishes.

Cordially,

JOHN M. CORNMAN,
President.

NATIONAL FARMERS UNION,
Denver, Colo., April 10, 1978.

Hon. PATRICK J. LEAHY,
United States Senate, Washington, D.C.

DEAR SENATOR LEAHY: Thank you for taking up the fight for Rural Development. I offer the following comments:

(1) Recapitalization is the most important single need for redevelopment of all of rural America. Rural America has sent some $300 billion of young people to the industrial and metropolitan areas of America. This is in terms of cost of living, education and training of young people. More than $300 billion has been pumped out of rural America in terms of losses and loss of profits that the farmer has sustained and the processors, distributors and consumers have gained. No industrial society could possibly withstand that drain. In less than one generation the cities have gone busted because they have encouraged the rural people to leave a lower rural standard of living and quality of life to gain what they felt was a better standard of living. This is especially true of the Black people and Chicanos.

(2) We need a genuine development policy—fully as much as the urban policy.

(3) We need a national land use policy integrated with state land use planning and much stronger state land use laws. The states gave away the authority vested in them by the Constitution to local authorities where the power structure is controlled by those who look upon land and space as a commodity to be bought and sold for a profit rather than a heritage to be preserved, treasured

and passed on to the next generation in as good or better condition than it was when the generation received it.

(4) We need a multi-billion loan and grant rural development bank which can make both grants and loans directly and to act as a bank of discount for state government rural banks.

(5) We need a specialized commission established to set up standard and measuring sticks to establish departments or rural development in each and every land grant college. The present Agricultural College Research is commodity and profit oriented and believes that in all cases bigger is better. A rural sociologist who thinks in terms of people first and commodities and profits second is usually fired as soon as he offers such opinions. He seldom lasts long enough to be tenured.

We do not need more research for knowledge about the terrible lack of decent water supplies, sewer systems, health delivery inadequacies, housing—worse than urban—very bad transportation. We need people in our educational institutions who will teach a philosophy of rural living and what needs to be done to create a high quality of living for people who live in rural areas.

(6) We need more people who have the attitude that you seem to have, i.e. life can be beautiful, enjoyable, healthful and very productive if we do revitalize rural America.

I am sick to death of having every bill that becomes a law relating to agriculture, espouse the glories of family farming and rural America while, following the statement of purposes, the language of the bill and the way the lawyers write the intent of Congress puts in motion giant steps to drive land prices up, drive small farmers out of business and provide billions of dollars for the larger and corporate (non-family) farmers with many subsidies from prime money to high water subsidies and commodity subsidy payments, drive the smaller less well capitalized and usually younger farmer out of farming.

Every member of the House and Senate Agriculture Committees and others should read Oliver Goldsmith's poem "The Deserted Village" which begins, "Ill Fares the Land" . . . . once each hearing.

I wish that I were living in Washington. I would like to visit with you and appear before your committee.

Respectfully,

JAMES G. PATTON,
President Emeritus, National Farmers Union.

[AN EXCERPT]

THE DESERTED VILLAGE

By Oliver Goldsmith, 1728–1774

Ill fares the land, to hastening ills a prey
Where wealth accumulates and men decay;
Princes and lords may flourish or may fade;
A breath can make them as a breath has made:
But a bold peasantry, their country's pride,
When once destroyed, can never be supplied.
A time there was, ere England's griefs began,
When every rood of ground maintained its man;
For him light labor spread her wholesome store,
Just gave what life required, but gave no more:
His best companions, innocence and health;
And his best riches, ignorance of wealth.
But times are altered; trade's unfeeling train
Usurp the land, and dispossess the swain:
Along the lawn, where scattered hamlets rose,
Unwieldy wealth and cumbrous pomp repose;
And every want to opulence allied,
And every pang that folly pays to pride.
Those gentle hours that plenty bade to bloom,
Those calm desires that asked but little room,
Those helpful sports that graced the peaceful scene,
Lived in each look, and brightened all the green—
These, far departing, seek a kinder shore,
And rural mirth and manners are no more.

UNIVERSITY OF KENTUCKY,
Lexington, Ky., April 11, 1978.

Dr. FRED SCHMIDT,
c/o Senator Patrick Leahy,
232 Russell Office Building,
Washington, D.C.

DEAR FRITZ: I just received your letter of April 3, and I would like to comment on your hearings draft.

1. I think it is a mistake to separate agricultural from rural development research. Part of the problem is that the improvement of the level of living of the rural population has been equated with an increase in agricultural productivity. As a number of recent books and articles have pointed out, this simply doesn't work. Looking at it another way, true rural development is unlikely to take place until it is integrated with agricultural issues.

2. Part of the problem stems from the fact that agricultural scientists have a very narrow way of defining research problems. As a result, despite their avowed applied emphasis, only technical, as opposed to social, issues are addressed. This issue is addressed at somewhat greater length in the enclosed paper.

3. Agricultural research is well supported not only because of friends in Congress but also because of the corporate interests it serves. This is both its strength and its weakness. In contrast, rural development research serves no definable interest group, and, as such, it is under funded. It would do us well to remember that USDA created the Grange and the Extension Service created the Farm Bureau. Perhaps we need a similar organizing effort around the rural non-farm population.

4. The commodity specific character of advisory committees at all levels within USDA and the Land Grant Colleges has several deleterious consequences: first, it encourages one crop farming and hence makes small farmer participation difficult. Second, it ignores overall goals and focuses upon means (productivity). Third, it puts rural development issues into a strictly sideline category.

5. The general goal of achieving efficiency dominates agricultural research. It is generally defined quite narrowly and in such a way as to imply single, simple solutions to complex problems. Rural development research may address these issues in one of two ways: first, it may attempt to demonstrate how certain policy alternatives are in some sense efficient. Alternatively, it may abandon the goal of efficiency as irrelevant to rural development research. If it does the former, it merely perpetuates the illusion of a single optimum. If it does the latter, it may receive no funds at all.

I hope my thoughts are of use to you.

Keep up the good work.

Sincerely,

LAWRENCE BUSCH,
Assistant Professor.

THE AGRICULTURAL SCIENCES AND RURAL/URBAN DEVELOPMENT

(By Lawrence Busch, Department of Sociology, University of Kentucky, Lexington, Ky., Paper To Be Presented at 9th World Congress of Sociology, Uppsala, Sweden, 1978)

In the last three decades we have witnessed what is certainly the most widespread redistribution of population ever to occur on the face of the earth. Demographers and other social scientists have been busy documenting the extent and the characteristics of participants in this enormous population shift. Others have focused on the increasing inability of nation-states to provide essential services for their fast growing urban populations. This is not to suggest that rural areas were entirely forgotten; in developed countries sociologists have documented the decline of rural communities and the increasing size of farms. In the less developed countries they have frequently been involved in various resettlement schemes designed, we are told, to raise the level of living of rural populations.

Virtually all these population shifts and resettlement schemes have one thing in common: They were made possible by "scientific" agriculture. This is not to say that they were caused by agricultural research but that without the products of agricultural research such population shifts could not have occurred.

Many observers have noted the problems associated with both population shifts and resettlement schemes. These studies have generally focused upon questions of "adjustment." Few, if any, have examined the system of agricultural research that makes these population shifts "necessary."

What I propose to do here is to illustrate that many of the unwanted population shifts and undesirable consequences of resettlement projects are the result not only of a misplaced focus within agricultural research but also of the internal dynamics of the agricultural sciences. While support for such a hypothesis must at present be merely illustrative, enough evidence can be produced to suggest some theoretical linkages and policy alternatives not hitherto considered.

In the first part of this paper, I attempt to show how the agricultural sciences developed not in response to the internal demands of the sciences but due to the needs of the class structure of the modern world system. Then I examine the internal logic of the agricultural sciences and show how it, too, is system supportive. In the third section, I examine several cases of population shifts and resettlement schemes. In each case I attempt to show the role the agricultural sciences played in those population "schemes." Finally, I make some suggestions for creating and/or revising agricultural science policy so as to make the effects of its products more equitable.

THE AGRICULTURAL SCIENCES AND THE MODERN WORLD SYSTEM

As Wallerstein (1972, 1974) has noted, agriculture played a primary role in the creation of what he has termed the "Modern World System." Starting about 1450 there have emerged three types of states: the core, the semiperiphery, and the periphery. The core consists of those states in which both labor and capital are most highly remunerated. The semiperiphery consists of those "older" states no longer part of the core. "The periphery * * * is that geographical sector * * * wherein production is primarily of lower-ranking goods (that is, goods whose labor is less well rewarded) but which is an integral part of the overall system of the division of labor, because the commodities involved are essential for daily use" (1974:301-2). Moreover, peripheral areas tend to be monocultural; in other words, each periphery state tends to produce one or two cash crops for the benefit of the world economy.[1]

From the 17th century to the present, more and more of the world has been incorporated into the modern world system. As a result of volume of agricultural commodities grown for export has increased steadily. Until the late 19th century, however, much of the increase was attained by increasing the land area devoted to the production of export crops.

The nonproprietary character of improved seeds and methods of cultivation limited research that would increase productivity *per hectare*. As Evenson and Kislev put it, referring to sugar research, "it soon became clear that it was not profitable to make larger investments in private effort because the plantation was unable to capture more than a small fraction of the benefits" (1975:48). Nevertheless, the competitive character of export markets encouraged decreased costs and increased yields. The worldwide experiment station movement of the late 19th century provided a solution to the dilemma by making research the province of the state, or, somewhat less desirably, of a growers' association.

The bias in favor of the owner of the large farm or plantation oriented toward export production was apparent at the beginning of the experiment station movement. In the United States, Representative Hatch was to argue that experiment stations were needed in order to insure the U.S. lead in agricultural exports (Hatch, 1886:2). Moreover, as Rosenberg has written, "the political needs of the station scientists guaranteed that the educated, adequately capitalized farmer would be their natural ally in the achievement of power. Indeed, the larger the scale of the enterprise, the more likely it was—in general—to find experiment station scientists relevant. Innovation and adoption implied both capital and appropriate values" (1971:18). Similarly, Evenson and Kislev note that sugar cane experiment stations were generally established in countries where grower organizations were strong (1975:48).

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[1] See also deJanvry (1975), Chilcote (1974), and Averitt (1969) for similar perspectives.

In the United States, early agricultural research tended to focus on grains. This was in large part the result of an historical accident: the major American export crops were food grains. By contrast, in former British colonies, central research institutes were established focusing on specific export commodities such as coffee or cocoa (Moseman, 1970:57). Japanese policy toward their colonies also reflected this export emphasis: "The official economic policy of the Japanese administration in Taiwan emphasized expansion of sugar production rather than rice production during the first two decades of the colonial period" (Evenson, Houck, and Ruttan, 1970:462). In addition, U.S. policy toward its Latin American neighbors was oriented in this direction. Writing of the establishment of the first cooperatively run experiment station in the Americas, Moore observes that these and other stations were primarily "designed to promote profitable production of * * * export crops * * *" (1943:107). Nor has the situation changed recently. Summing up the current situation in tropical areas—where most export crops are currently grown—one observer notes that "it is repeatedly stated that tropical staples are ignored in research programs, while export crops are studied extensively" (Janzen, 1975:107). One result of the bias toward research on export crops is that in the tropics "maize is now generally relegated to the poorer lands, because the better lands are frequently devoted to cash crops such as cotton, sugar cane, and coffee" (Wellhausen, 1975:61).

Worldwide evidence is more difficult to come by. That which is readily available is summarized in Table 1. That table contrasts the number of crop-specific journals published for each of the major food grains with those focusing on the number of the major export crops. It is immediately apparent that a great deal more effort is expended on export crop research than on research relating to food grains. Moreover, the data reveal that, within most countries, research on export crops predates that on food grains. Indeed, in half the nations studied, no grain-related serials were published. Of course, it may be readily conceded that such indicators are quite crude. As such, it *would* be unwise to employ them as a means of gauging *national* research priorities. However, for the world as a whole the pattern is remarkably clear. It appears that on the level of decisions as to what to study, the agricultural sciences have been strongly influenced by the needs of the modern world system. As Susan George has put it, agricultural research

> "Only got under way * * * because settlers introducing cash crops into newly colonized areas found their plants being attacked by myriad diseases and pests in unfamiliar environments and the planters themselves were being wiped out financially. Research stations sprung up throughout the colonial world, but predictably paid no attention whatever to local food crops. This research lag between cash and food crop is, alas, still with us" (1977:67).

Does this not, however, merely suggest that research expenditures in agriculture must be redirected toward food production? Moreover, doesn't it suggest that expenditures on agricultural extension need to be increased so as to see that benefits of research reach even the smallest farmer? Put another way, are we really talking about a problem of science or are we instead concerned with the social system that provides its funds and diffuses its results? In the past most social science research has focused on the impact of the product of the agricultural sciences and has avoided an examination of its internal logic. Yet these questions can only begin to be addressed if we inquire into how the products of the agricultural sciences are themselves produced. Let us now turn to that subject.

THE INTERNAL DYNAMICS OF THE AGRICULTURAL SCIENCES

From the 17th century to the present scientific development has generally been viewed as independent of societal development. Moreover, as the doctrine of progress was institutionalized during the 19th century, it appeared that there was little that science could produce that would not be of benefit to the larger society. As Rosenberg has claimed, "moral and scientific progress did not seem contradictory but, to the ordinary American, inevitably parallel and complementary" (1976:3). As a result,

> "The entire technology of agriculture was machine-like in its advance. Although at times farmers seemed sluggish in their acceptance of improvements * * * there were no organized resistance of workers to its adoption. The new machines, plants, fertilizers, and all the new developments were looked on as undiluted goods." (McConnell, 1953:14).

This faith in science infected the western world and prepared the way for even more rapid technical change.

Nor was this tendency restricted to those of a conservative ilk. Even Lenin was convinced of the overwhelming desirability of modern scientific methods in agriculture. In his work on "Capitalism in Agriculture" he asserted that "all European agricultural statistics show convincingly that the larger the area of farms the greater is the proportion of farms using machinery of all types. The superiority of large-scale farming in this very important respect has been fully established" (1938:219).

This is not to say that the public view substantially differed from the self-image held by the proponents and practitioners of agricultural science. To the contrary, it appears that researchers have been and remain the staunchest proponents of this view.

For example, the reductionist character of the agricultural sciences is well-known (Bunting, 1971:442; Janzen, 1975:103). It is manifested in the high level of specialization currently found in agriculture. The purpose of this specialization is to achieve total control over a small aspect of nature. Yet, as Berry has sadly noted, this attempt at total control leads to disorder (1977:71). The problems caused as a result of the indiscriminate, wide-spread use of pesticides is a case in point.

Similarly, absolute knowledge is still considered by some to be within reach. One writer, for example, rhetorically asks, "'can our agriculture engineer in century 21 develop theoretical models that can completely and irrefutably describe hydrologic phenomenon?" (Lanham, 1976:34). While the author doesn't foresee such models as likely in the near future, it is clear that sooner or later engineers will arrive there.

So sedimented is fundamental faith in progress that one experiment station director was able to argue that "the challenge for agriculture research in the 1970's is simple: do better what we are already doing well" (Wood, 1970:102). While in recent years the spokesmen for the agricultural sciences have been more willing to admit to the existence of undesirable consequences of agricultural research, they are yet perceived as part of the inevitable construction of absolute knowledge. One spokesman writes as follows:

"We are hopefully at an era in our history when social and economic justice and equality, freedom, and stability have become equally as important as efficiency and progress among our societal goals. The problem becomes one of achieving orderly and equitable social and human adjustment to the conditions created by technological advance." (Rossmiller, 1969:4).

The author takes as given that certain kinds of new technology will be developed; hence, the problem becomes one of ameliorating the more unpleasant effects of that new technology.

Perhaps, the most telling critique of contemporary agricultural science, however, is its emphasis on efficiency. While values have already reduced to secondary status through the conception of absolute knowledge as "the facts," the quest for the illusive goal of efficiency permits practitioners to avoid all questions relating to values. Human values are reduced to economic "value." Efficiency becomes the yardstick upon which all research is measured. Indeed, a rather substantial body of literature has developed on the economic returns to agricultural research (e.g., Evenson and Kislev, 1975). This utilitarian view of agricultural research, particularly prevalent in agricultural engineering and food technology, appears quite reasonable. Yet it belies "a narrow acceptance of the present structure of agriculture as a given condition which restricts options" (Levins, 1973:523). That is to say, it is strongly supportive of the *status quo* in its effort to be "useful". And by so being useful, it simultaneously perpetuates the *status quo* and denies alternative possibilities. For example, small scale farm machinery is not developed because it is inefficient. The large scale machinery that is developed increases the gap between small and large farmer and convinces the engineer of the rightness of his assumptions. The fact that efficiency, far from being a part of the natural order, is socially constructed through myriad government policies, the plans of the agribusiness conglomerates, and the prices the Saudis decide to charge for oil, passes by unnoticed. Efficiency is mystified, reified.

In sum, the agricultural sciences can be characterized by what Habermas (1970) has termed "instrumental rationality." From Descartes, they have borrowed the principles of (1) absolute knowledge, (2) the separation of facts from values, (3) reductionism, and (4) an unshakeable faith in progress. From Bacon, they have inherited a utilitarian attitude towards agriculture.[2] Their implicit premises are, thus, quite similar to those of *laissez-faire* economics (Haberer, 1969:72). This, I submit, is no accident. Both models arose with the modern world system. Both models have attempted to explain how the actions of autonomous individuals could lead to the creation of a coherent whole. Both models have emphasized means and, in so doing concealed the same class interests. Finally, both models—no matter how liberating they may have been at the outset—have become ideologies.

Thus, it is apparent that not only have the agricultural sciences been focused upon those commodities and problems necessary to the maintenance of the modern world system but that they are structured intentionally so as to systematically exclude alternatives.

Let us now examine several settlement patterns. It is there that the ideologies of science *and* economics have been at work.

SETTLEMENT PATTERNS AND AGRICULTURAL SCIENCE POLICY

Over the past century, there has been a gradual trend world-wide toward an increase in state power. Among the many things brought under the purview of the state during that period is the planning of settlements. While this is normally conceived in the narrow sense of new towns or resettlement schemes it is perhaps more appropriate to view larger population shifts within the same theoretical framework.

Until approximately one century ago there existed no state apparatus responsible for the distribution or redistribution of population. Of course, populations were redistributed; as Rome declined thousands of people left the cities for the countryside. With the rise of capitalism the enclosure acts brought mass exodus from the countryside and the creation of relatively large urban populations. In neither of these cases, however, was the state directly involved in the redistribution of population. More recently, however, the state has taken an active role in redefining settlement patterns. For example, the Ujamaa Villages in Tanzania, the collectivization of agriculture in the Soviet Union, and the creation of agricultural communes in China have had a major impact on the development of those countries. Moreover, projects such as the Volta River Development scheme and the irrigation of the Imperial Valley in California have had equally profound, if more localized.

While it may appear a trivial point, it should be noted that few, if any, changes in settlement patterns have been ends in themselves. They have always been either means for or the side effects of attempts to achieve other goals. Thus, population shifts and resettlement schemes must always be viewed as parts of larger processes ultimately traceable in principle to the interests of some group or individual.

At the national level the United States is perhaps the best documented case of the relationship between agricultural science and changing settlement patterns. Over a period of approximately one hundred years, and especially in the period since World War II, a process has occurred which Wendall Berry has termed "the Unsettling of America" (1977). As Table 2 Illustrates, during the period from 1920 to 1970 over 35 million people moved to the cities. As Berry puts it, "what we have called agricultural progress, has, in fact, involved the forcible displacement of millions of people" (1977:41).

Much of the rural-urban migration has been in fact due to the increasing mechanization of farm operations. Machines are not only bigger and more costly than they were in the past but they also do work previously performed only by human beings. While some have suggested that mechanization was a response to a short farm labor supply, a number of studies suggest that this is not, generally, the case (Dillingham, 1966; Friedland, 1975). Moreover, mechanization has not only reduced the need for hired farm labor; it has reduced the number of farmers as much machinery is too large for smaller operations.[3] As a result, increased farm size has gone hand in hand with population displacement. In addition, the trend towards bigness can be only partially explained by increased efficiency; many farms in the United States are already larger than that needed for efficient operation (Faux, 1973).

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[2] For a more thorough review see Haberer (1969), Busch (1978), and Leiss (1972).

[3] Abercrombie (1972) makes a similar case in regard to farm mechanization in Latin America.

At the level of the community the Gezira Development scheme provides us with what is probably the most well documented and long standing resettlement scheme currently functioning. The Gezira refers to an area of land located between the Blue and White Niles in the Southern Sudan. This hot, dry, and generally flat plain has been under irrigation for some fifty-odd years.

While the Gezira has been considered highly successful by many, it has recently come under considerable attack. According to Barnett, "the major factors in the establishment of the Gezira scheme were not only the decline of the British cotton industry but also the requirements of the imperial grand strategy" (1977:4). In brief, it is argued that the scheme was established in large part in response to the owners of the Lancashire cotton mills. They needed a steady supply of high quality cotton not available in either the Egyptian or Indian Colonies. The Gezira, when properly irrigated, and planted with improved varieties promised a steady supply of cheap, high quality cotton. This scheme, like virtually all other smallholder irrigation projects, has forced a highly authoritarian organizational structure upon the residents. In addition, it has made the nuclear family the relevant unit of population and forced a form of possessive individualism upon the tennants (Barnett, 1977:89, 96). Moreover, at the national level, "this kind of dependence upon cotton monoculture places the Sudan in a precarious economic position in terms of its trading (not to say political) relations with other countries" (Barnett, 1977:14).

What we must ask then is what role the agricultural sciences played in the development of the Gezira? It is curious that we must go to an earlier, and virtually uncritical, work by Gaitskell (1959) to find an answer to our question. As that author put it:

"In 1918 a Gezira Research Farm had been started near Wad Medani, the capitol of the Blue Nile Province, to study soil and water management, crop varieties, rotations, cultivation practices, fertilizer response and, of course disease and pests. With the setting up of this scientific station in the heart of the Gezira there began a close association between the back-room boys of the research farm and the field staff of the Syndicate, not all times easy but always stimulating and destined to play a vital part in the survival of the scheme" (1959:138).

This research farm, financed by the government with a contribution from the privately owned Syndicate was connected to the "Empire Cotton Growing Corporation" as well as to the Rothamsted Experimental Station in Britain (Gaitskell, 1959:139). In short, despite protestations to the contrary, the agricultural research performed in the Gezira, and without which the entire scheme would have been unworkable, can in no way be regarded as the work of disinterested practitioners. Instead, it must be regarded as fully integrated into and supportive of the modern world system.[4]

Nor can we regard the Gezira experience as aberrational. The Volta River project in Ghana provides us with yet another illustration. There we find that "in addition to choosing suitable soils, using improved seeds, and applying fertilizers, manures, insecticides and fungicides, the *agriculturalists* were convinced that the way to obtain the required high increases in field crop production was to introduce mechanization" (Kalitsi, 1970:42, emphasis mine). Indeed, they initially assumed that, with resettlement, farmers would switch from their complex intercropping systems to the growing of a single, mechanized cash crop (Chambers, 1970:236). One observer has noted that "one is entitled to wonder what this degree of mechanization would leave for the farmer to do; ***" (Kalitsi, 1970:42). While the technical problems proved virtually insurmountable, it is clear that scientific work was directed toward the substitution of a single export crop for the balanced crop production typical in most African villages.

Similarly, both Belshaw (1969:18) and Moris (1969:84), in discussion of recent resettlement schemes in East Africa, have noted that agricultural research there has emphasized cash crops, capital intensive methods, and mechanization. Finally, Sorrenson (1968), reffecting on the origins of European settlement in Kenya, has noted a similar pattern in agricultural research conducted there.

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[4] The researcher's link to the modern world system is also revealed in that when the country was turned over to the Sudanese, most of the researchers left (Gaitskell, 1959: 328).

In short, while the evidence is necessarily sketchy, it appears that agricultural research has tended to favor export crops over food crops and capital intensive over labor intensive methods. As a result, population shifts and resettlement schemes have tended to (1) increase personal and national dependency upon the vagaries of the world commodity markets, and (2) concentrate power and wealth in the hands of those who can afford the high-cost inputs. Moreover, large number of individuals have been forced off the land contributing to already high urban unemployment.

REVISING AGRICULTURAL SCIENCE POLICY

Sometime ago, David Lowenthal (1960) vividly illustrated how three different cultures settled an area that is topographically and climatologically approximately the same. The contrast between the Guianas served to underscore the link between culture and agricultural science and technology. If we are to have a world which is meaningful, then we can no longer afford to accept the products of agricultural research as undiluted goods. Nor, can we afford to let efficiency remain the sole measure of the value of research.

What factors then must an agricultural science policy include if it is to produce genuine development? Obviously, it must put food production ahead of the production of export commodities. Moreover, as Heady (1971) and Friedland (1974) have suggested, at the very least the welfare implications of agricultural research must, in so far as possible, be made explicit before projects are undertaken. What this means is that a form of cost benefit analysis must be developed which takes into account: (1) more than the returns to research in terms of increased productivity, and (2) includes factors such as family structure, the social role of particular crops, and the kind of social structure necessary to increase productivity, even though these remain unmeasurable in economic, or even quantitative, terms.

Systems analysis, already in wide use within biology, presents one possible method for achieving this aim. However, it is well to remember that:

> As soon as we recognize that physical systems are embedded in, or interact with social systems, we recognize that science . . . can no longer be free from value judgements. Social systems involve not merely the interactions of physical forces but also contests of will arising from the purposiveness of behavior of animate elements in the system (Dillon, 1976:7).

In short, systems analysis can not be used as a way of avoiding human judgement; it can only provide an aid in making such judgments. What is advocated here is not the creation of a "department of cost-benefit analysis" at every agricultural research institute. Such analyses will only be of value if they are fully integrated into the process of doing agricultural research. Put another way, agricultural research must be re-defined so as to include far more than what goes on in the laboratory or experimental field.

The third world presents yet another series of problems in addition to those already discussed. As Robert Seidel (1975) has suggested, the third world suffers from the "burden of derivative modernization." The lack of research capabilities in the third world forces them to be overly reliant on the generally inappropriate products of agricultural science produced in the west. Moreover, as many third world scientists received their training in the west, they are socialized in such a way as to carry a great deal of western "baggage" back to their homeland. As a result what little research is done in the third world often suffers from the same inappropriateness characteristic of products borrowed from the west.

This bring us to that extremely popular topic of alternative or appropriate technologies. Ever since the publication of E. F. Schumacher's *Small is Beautiful*, (1973) there has been a surge of effort in the direction of so-called appropriate technology. Yet, as Dahlberg suggests in a recent paper (1978), we must not confuse alternative technologies with alternative systems. As Dahlberg notes, those associated with alternative technologies tend to be occupied with short-term questions and are frequently unaware of the sociocultural implications of their technological solutions. By contrast, those with a systems orientation tend to have a longer time span to their research and rely less on experiment stations trials. "Appropriate" technology is no more appropriate than any other technology if it avoids the sociocultural questions discussed above.

One major attempt at research aimed at the development of alternative systems can be found in China. There, the development of a "mass scientific network" (Sigurdson, 1977:80), attempts to integrate research and extension in agriculture, public health, and industry. By centering improvement in technique and equipment at the village level, the Chinese appear to have kept costs down and benefit evenly distributed. One observer has noted that "'local agricultural methods and varieties of seed have been upgraded to maximize output ***" (Erisman, 1975:340). One the other hand, it appears unfortunate the Chinese have devoted little attention to basic or long-term research (Sprague, 1975:58). While it is too early to assess the success of the Chinese experience, or even its desirability, it does suggest that alternative approaches to agricultural science are within reach. If settlement patterns are to reflect equity rather than inequity, the interests of society as a whole rather than those of the status quo, and meaningfulness rather than alienation, then a great deal more attention must be paid to the social system of agricultural research.

TABLE 1.—CROP-SPECIFIC AGRICULTURAL SERIALS IN PRINT FOR SELECTED CROPS

SITC No.	Crop	World Market economics value exported—1974	Number serials 1970 (N=66)	Number nations with serials
	Cereals:			
041	Wheat	$9, 648, 886	32	13
042	Rice	2, 403, 941	77	20
043	Barley	1, 523, 399	12	8
044	Maize	6, 101, 788	31	14
—	Sorghum/millet	NA	2	1
—	Oats	NA	5	2
	Export crops:			
0513	Bananas	684, 041	7	6
061	Sugar	7, 055, 909	160	35
071	Coffee	4, 674, 580	77	24
072	Cocoa	2, 252, 667	28	10
074	Tea	799, 223	52	14
121	Tobacco	2, 208, 886	113	33
2311	Rubber	3, 140, 349	33	11
263	Cotton	4, 296, 779	118	25

NA=Not available.

Sources: United Nations, 1976; Boalch 1965; IAALD, 1966–70.

TABLE 2.—U.S. FARM POPULATION AND NET MIGRATION FROM FARMS, 1920–70

[Population numbers are in thousands]

	Farm population	Net migration from farms during preceding decade	Net migration as percent of total U.S population
1920	31, 974	NA	
1930	30, 529	−6, 296	5. 13
1940	30, 547	−3, 850	2. 92
1950	23, 048	−11, 393	7. 56
1960	15, 635	−10, 128	5. 68
1970	9, 712	−6, 940	3. 41
Total migration	38, 567		

NA=Not available.

Note.—The definition of a farm was modified over this period so migration figures are probably somewhat inflated

Source: U.S. Bureau of the Census, 1975:96,8.

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THE OHIO STATE UNIVERSITY,
Columbus, Ohio, April 14, 1978.

Dr. FRED SCHMIDT,
c/o Senator Patrick J. Leahy, U.S. Senate, Committee on Agriculture, Nutrition and Forestry, Washington, D.C.

DEAR FRED: I received a letter from Senator Leahy a few days ago requesting that I look over the outline for the hearings on the status of non-farm rural development research.

Let me relay to you one concern that I have concerning the structure and intent of the hearings. My feeling generally is that the "non-farm" emphasis of the hearings may detract needed attention away from the fact that the character of agricultural development and policy may have a decisive impact on the nature of rural development. In other words, what I feel is needed is more work on how particular agricultural policies (e.g., encouraging small-scale agriculture) can have beneficial rural development consequences. Put somewhat differently, it seems that rural development policies divorced from secular changes in the agricultural sector may not yield significant leverage on the problem.

I would propose that Senator Leahy solicit testimony relating to studies showing that, for example, farm size has a decisive impact on the non-farm rural population. This of course flows from the old Goldschmidt work, but is also represented quite well in Steven Sonka and Earl Heady, "American Farm Size Structure in Relation to Income and Employment Opportunities of Farms, Rural Communities and Other Sectors" (Ames, IA: Center for Agricultural and Rural Development, Iowa State University, 1974). It might be worthwhile to invite Heady. Also, if you were desperate for testimony, I could dust off a year-old paper that talks about how small farm policies should be an integral aspect of an overall rural development policy.

I hope that some of this type of material might be incorporated in the hearings.

By the way, you may have heard that I will be moving to your alma mater in Ithaca. They gave me an attractive offer, plus the facilities and general environment were quite appealing. I will be moving there on or about June 20, 1978, so please send correspondence to Cornell after that date.

Good luck with your hearings.

Best wishes,

FREDERICK H. BUTTEL,
Assistant Professor of Sociology
and Rural Iociology.

SMALL FARM AND RURAL DEVELOPMENT POLICY IN THE U.S.: RATIONALE AND PROSPECTS[*]

(By Sharon Powers and Jess Gilbert, Department of Resource Development, Michigan State University, East Lansing, Mich., and Frederick H. Buttel, Departments of Sociology and Agricultural Economics and Rural Sociology, Ohio State University, Columbus, Ohio)

INTRODUCTION

A recent resurgence of interest in small farmers has led to debate as to appropriate policy option (General Accounting Office, 1975). The question has been put rather bluntly, "Are small farmers worth the effort?" (Marshall and Thompson, 1976). Our purpose is to establish a rationale for the need for a small farm policy, and to examine some alternative policy directions and goals. We start with the basic assumption that rural development is a valuable goal, as is protecting environmental quality and conserving scarce natural resources. We use rural development in its broadest sense as the basic rationale for development of a small farm policy, but resource-related questions are also considered to be important, particularly as we move to discussion of alternative scenarios.

The goals of rural development commonly include establishing or maintaining a strong economic base and viable social life for the community, providing opportunities for self-actualization of the individual, and advancing equity within the society as a whole. After defining our terms, we show how a system of small farms can facilitate these development goals, examine some natural resource-related questions, and look at alternative policy directions.

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[*] Paper prepared for presentation at the annual meeting of the Rural Sociological Society, San Francisco, California, September 1978.

DEFINITIONS AND CHARACTERISTICS OF SMALL FARMS

Defining small farms is somewhat problematic, particularly for purposes of rural development goals. Because of the diversity of crops and livestock in agricultural production, the physical constraints of agricultural land in different sections of the country, and the interplay of farm and off-farm employment of rural people, there is no universally accepted definition of a small-farm operator (General Accounting Office, 1975). Measurement variables which could be used include capital invested; physical units such as acres, labor, or number of livestock; or gross or net income (which may or may not include off-farm income figures) (Thompson and Hepp, 1976). For purposes of rural development goals, size would appear to be a relevant factor since we are concerned with the survival and establishment of farms which have been regarded as being too small to be efficient in the conventional economic wisdom. According to the U.S. Department of Agriculture's Economic Research Service, gross farm income and total family income are the most important factors to use in defining a small-farm operator. Most USDA officials consider gross annual sales of $20,000 to be the upper limit of a small-farm operator (General Accounting Office, 1975).

Figures presented in the GAO study show the following numbers of farms in the U.S.:

Gross annual sales	Numbers	Percent
$40,000 and over	446,000	16
$20,000 to $39,000	563,000	20
$10,000 to $19,999	332,000	12
$5,000 to $9,999	262,000	9
$2,500 to $4,999	488,000	17
Less than $2,500	753,000	26
Total	2,844,000	100

A recent Michigan study further differentiates farmers with less than $20,000 of gross annual sales. Full-time small farm operators are defined as persons under 65 years of age, working less than 100 days/year in nonfarm employment, with annual farm sales of less than $20,000. *Senior citizen* farmers are those who receive social security or are over 64 years of age with annual farm sales of less than $20,000. Part-time farmers are divided into *rural residents*—those persons under 65 years of age who are working more than 100 days/year in non-farm employment, with annual farm sales less than $2,000, and *supplemental income* farmers—those farmers under 65 years of age, working more than 100 days/year in non-farm employment, but with annual farm sales between $2,500 and $20,000. This study using 1969 data found that 22 percent of Michigan's small farmers were full-time, 15 percent were senior citizens, 29 percent were rural residents, and 20 percent were supplemental income farmers (Thompson and Hepp, 1976).

The economic welfare of these farm families cannot be adequately judged unless information about off-farm income is available. The Michigan study (see Table I) showed that full-time small farm families had the lowest average income. The supplemental income families had the highest net income due to a combination of farm income second only to the full-time farmers, and off-farm wages second only to the rural residents. Senior citizen families had the second lowest net cash farm income and off farm income from a variety of sources. Almost half of the full-time farm families and 30 percent of the senior citizen families had incomes under $5,000—compared to only five percent of the rural residents and six percent of the supplemental income group. It should be noted that Michigan is atypical in the extent of off-farm work opportunities in agricultural areas facilitating part-time farming operations (Thompson and Hepp, 1976).

Such disaggregated data as that from the Michigan study do not exist for the nation as a whole. The evidence which does exist shows that in 1970, about

19 percent of the farm households with gross annual farm sales under $20,000, excluding those in which the head-of-household was classified as part-time or semi-retired, did not have any off-farm income, and an additional 33 percent did not earn any salaries and wages from off-farm sources. Salaries and wages accounted for about 61 percent of the total off-farm income received in 1970 by all farm households. When a small farm operator is considered to be a person who is under 65 years of age, works off the farm for wages less than 100 days a year and sells less than $20,000 of agricultural products annually, 1969 data show that an estimated 37 percent of the 1.8 million farmers with agricultural sales of less than $20,000 in 1973 met the above definition (General Accounting Office, 1975).

There appear to be state and regional differences in the numbers and characteristics of small farmers. For example, about 90 percent of Mississippi's farm operators have annual sales of $20,000 or less (U.S. House, 1976, p. 78). More than one-half of all farms with sales under $5,000 are located in the South (Marshall and Thompson, 1976). For Maryland, in many counties one-half or more farmers fit the definition of full-time small farmers (U.S. House, 1976).

Among the over 2,000,000 small farms, then, there is great diversity. We shall see that because of age, education or handicaps a certain number of the operators cannot be expected to become fully self-supporting, no matter whether they work on the farm or off. Many small farms, on the other hand, can be upgraded to yield higher incomes, while additional farm families need to be offered wider non-farm employment possibilities. Policies must address all these issues, and we indicate certain directions at the end of our paper. First, however, we shall set forth a basic justification for small farm policies within the context of rural development.

THE RATIONALE FOR SMALL FARM POLICIES WITHIN A RURAL DEVELOPMENT FRAMEWORK

As stated at the outset, rural development goals include psychological satisfaction, social well-being, and economic viability. Below we attempt to show that these three broad aspects of rural development can be significantly advanced through the encouragement of small farms.

Individual Goals

Farming as an occupation is frequently seen as facilitating personal self-actualization in a number of ways which have little to do with economic rewards. A study by Gasson in England (1971) rejected the theory of relative deprivation which predicted that the more economically deprived and status deprived farmers were, the less they would be attached to farming. Contrary to the hypothesis that farmers with the most potential for other professions would be the least attached to farming, it was found that farmers higher in opportunity cost by virtue of being younger and having had more education or training were more positive toward farming. Gasson concluded that farmers with more experience with alternative job options who take into account the intrinsic rewards of being a farmer, may be willing to eschew a higher income occupation for their present way of life. This phenomenon does not appear to be unique to Gasson's sample. Her findings were essentially replicated in Illinois by Van Es and McGinty (1974) who concluded that attachment to farming is an important non-economic variable.

A pilot study by Gasson (1973) in England explored values related to the occupation of farming. One sample of full-time farmers was asked what they particularly liked and disliked about farming and what they thought they would miss most if they had to change their occupation. Independence (being one's own boss or freedom to arrange and control work) was mentioned most frequently, followed by living in the country and enjoying an open-air life. Aspects of the work itself, such as variety and interest and being in control of a process from sowing to harvest, came next, while prospects of capital gain, making a good income and other instrumental aspects came low on the list. Another sample was asked their reasons for farming, and again independence, attachment to the land and the way of life, and work itself were emphasized above social and instrumental aspects. The same results were found for two more samples, using different measures of the major variables. Gasson analyzed her data for possible correlation between value orientations and size of farm business. It was the smaller farmers who tended to value the intrinsic aspects of farming more highly, while operators of medium and large farms placed greater emphasis on instrumental and social aspects. Among intrinsic attractions, independence was valued above all by those with the smallest businesses. The value ascribed to instrumental and social attributes of farming by commercial farmers in one sample tended to increase with size of business, with some decline in intrinsic values. Smaller farmers placed a higher value on making a *reasonable* living, while large farmers emphasized future income, and maximizing and expanding the business.

Gasson's research would have to be replicated in this country before further generalizations could be made, but there are indications that American farmers, whether full or part-time, hold similar values (Barnes, 1976; Logsdon, 1976; Bertrand, 1967). Data from a 1974 Michigan survey shows that when asked for reasons for living in a rural community, 66 percent of the small farm families responded with either appreciation of rural life or disdain for urban life. "Farm opportunity" (undefined in this publication) is listed by only 20 percent of the full-time farmers, 10 percent of the senior citizen farmers, 13 percent of supplemental income farmers and six percent of rural residents. These figures again suggest that small farmers are living as they do for reasons largely other than economic (Thompson and Hepp, 1976).

It has been argued that such small farmer responses are mere rationalizations for their lack of material success in agriculture. While this could be true to a certain extent, we assume that a large percentage of these responses reflect commitment to values other than purely monetary ones. Therefore, if rural development purports to enhance personal choice, then policies supportive of small farms can contribute to a larger development plan.

Social Goals

Until the 1970's, essentially no social scientific studies were conducted on the relationship between farm size and rural welfare. The sole exception seems to be Goldschmidt's work in California during the 1940's. The study compared two quite similar towns, the outstanding difference between them being the size of surrounding farms. Both areas produced about the same total dollar volume of agricultural output, but Goldschmidt concluded that, judging from every indicator, the community of small farms was far healthier. These indices included the number of and participation in decision-making institutions, the number of local business establishments, the quality of community infrastructure and facilities, the amount of retail sales in the community, and the occupational diversity of its citizens (Goldschmidt, 1947; 1972). These differentials still existed in the late 1960's (LaRose, 1972). While this study is not immune from criticism (Ottoson and Vollmar, 1972), it does point toward the view that a small farm system makes for better community life than does large-scale agriculture. Similar observations have been made in Minnesota; while the northeastern portion of the state is usually regarded as economically depressed, it is in southwestern Minnesota, where commercial agriculture flourishes, that the greatest amount of rural poverty is found (Ruttan, 1969; Raup, 1970). Further, a National Farmers Union survey indicates that for every six farms that fold, one small businessman consequently closes up shop (Hightower and DeMarco, 1973).

The most rigorous research on this subject was conducted in 1973 by Heady and Sonka. They projected for the year 1980 the various social and agricultural trade-offs which would become necessary if U.S. agriculture consisted of different sized farms: the Small Farm Alternative (gross farm sales of $2,500–$10,000), the Medium Farm Alternative ($10,000–$40,000), the Large Farm Alternative (over $40,000), and the Typical Farm Alternative (a mixture). As compared to the other three, the Small Farm Alternative could be expected to result in:

(1) the largest number of commercial farms (about 4.5 million more than existed in 1970);

(2) the highest total net farm income to the agricultural sector;

(3) the lowest net farm income per commercial farm (about $3,000 less than the 1970 average);

(4) the highest number of people employed, *both* in agriculture and rural off-farm sectors;

(5) slightly higher consumer food costs (under $50 per person per year); and

(6) the most income generated to off-farm sectors—"with the majority of the greater income finding its way through the rural community."

The Large Farm Alternative, on the other hand, would result in:

(1) the smallest number of commercial farms;
(2) the lowest total net farm income to the agricultural sector;
(3) the highest net farm income per commercial farm;
(4) the lowest number of people employed, whether in agriculture or in rural off-farm sectors;
(5) slightly lower consumer food costs; and
(6) the least income generated to off-farm sectors.

The above model, however, defines "small farm" at an unnecessarily low level of sales, the upper figure of which is only half of the definition used in this paper. Consequently, the average size of the Medium Farm Alternative (approximately $20,000) includes what we classify as a small farm; an overall moderation of the Small Farm Alternative results could thus be expected. Given this narrower gap between the Small and Large Farm Alternatives, the projections still clearly indicate that small farms contribute more than do large farms to the rural economy in terms of both employment (on and off the farm) and local commerce (Sonka and Heady, 1974).

Finally, from a social point of view, there is the question of equity. The "agricultural revolution" in the U.S. leading to larger and more commercialized farming has bestowed benefits to some and costs to others (Heady and Ball, 1972; Heady, 1970; Marshall, 1975). Perhaps the portion of the U.S. population most affected was the black farm population whose extreme case raises some of the current issues relating to equity. In 1910, Blacks owned over 15 million acres of land in the U.S. Between 1954 and 1969 alone, their land holdings were reduced by 4 million acres. Today, black ownership consists of less than 5 million acres. Most of this land is located in the South, where the average minority-owned farm is less than 80 acres (Salamon, 1975a). The drastic aggravation of inequality is a matter of major concern to many students of rural development who believe that black land ownership contributes substantially to social equity. A recent study supports this belief. Among black Southern farmers it was found that those owning land (due to the Farm Security Administration of the 1930's) assumed a considerably more active role in their local communities than did non-owners. Specifically, civic participation, organizational involvement, and an orientation toward the future were much more evidenced among the landowners. In addition, these small farmers emerged in the late 1950's and early 1960's as "the backbone of the civil rights movement in numerous locales" (Salamon, 1975b, 48–54).

The case for supporting small farms in order to achieve the social objectives of rural development, then, involves equity considerations as well as matters of community structure, income, and employment. While these latter factors are more applicable to full-time and supplemental-income farmers, the issue becomes even stronger vis-a-vis small farmers who are aged, uneducated, or otherwise handicapped.

Economic Goals

A major goal of development is to provide a strong economic base in rural areas. A system of small farms can be an important alternative means of providing jobs for rural people. We have seen in the previous section that such a system would create more *on- and off-farm* employment in rural communities than an agricultural system based on large farms. However, several economic issues remain to be discussed. One is the question of the economic efficiency of smaller farms and the relationship of efficiency goals to other rural development goals, and the second involves the costs and benefits of supporting small farms in relation to other methods of job generation.

The opinion is widely held that small farmers are less efficient than large producers and hence have been and will continue to be displaced from agriculture by economic forces (Marshall and Thompson, 1976). It is generally thought that the revolution in the structure and size of farms which has occurred in the U.S. since World War II has been a response to the emergence of large scale, capital intensive technology which requires increasing acreage to make it economically feasible (Bieri, 1972). The primary goal of agricultural production has been the efficient allocation of resources to agricultural production, given these capital intensive technological inputs (Raup, 1972). Recently, however, the assumptions underlying the concept of economic efficiency as applied to the farm sector have been questioned.

Marshall and Thompson (1976) examine three aspects of the economies of scale question—technical economies of size or "within-plant" economies; external economies related to the buying of inputs and the selling of outputs; and external factors arising from policy and its implementation. With regard to technical economies the major input favoring large farms is capital, assuming that most of the other types of advances (including new crop and livestock varieties, fertilizer usage and effective management practices) favor any size farm. However, the assumption that farms utilizing high levels of technology must increase in size to reduce unit production costs is based on the assumption that the farmer owns or controls all these capital inputs; this need not be the case. Smaller-sized farms could achieve the same levels of technical efficiency by custom hiring machinery. Further, instead of viewing the farm firm exclusively as a producer of goods, it can be regarded as a producer of services—the farm operator may sell surplus labor and machinery capacity to other farmers. Further, efficiency of size studies which determine optimal farm size do not examine questions of the *range* of efficiency. *How much less* efficient would smaller farms be, even given the assumption of machinery ownership? What if machinery were available which is more appropriate to smaller farmers? These studies also tend to focus on crops which are heavily mechanized. May not small farmers be more efficient in producing more labor-intensive crops? Marshall concludes that large farms are not necessarily inherently more efficient than small farms if capital can be made available in more discrete units. He then describes *external* economies of scale which favor large firms, such as obtaining discounts on large purchases of seed, feed, fertilizer and chemicals. Small farmers also face greater difficulties in obtaining credit than larger farmers because of the allegedly higher risks faced by small operators, their lower financial equity position, and the generally conservative lending policies of such institutions as the Federal Land Banks, rural commercial banks, Farmers Home Administration, and the Farmers Cooperative Service. Further, small farmers have a decided disadvantage in current marketing systems which involve competition with large vertically integrated and horizontally integrated firms. Small farmers do not control large enough supplies of agricultural products to have much bargaining power with buyers and are harder hit by large fluctuations in prices than larger firms. A third aspect of economies of size are federal tax and agricultural policies which have facilitated the economic viability of large farms over small farms. Tax policies currently favor larger farmers over smaller farmers, provide incentives for persons or corporations with large nonfarm incomes to enter farming, and amount to subsidies to land and capital rather than labor (Marshall and Thompson, 1976, p. 62).

Various assumptions supporting agricultural economic theory have been questioned. It has been suggested that concepts of efficiency are predicated on certain values. One of these is the *social viewpoint* regarding what should be considered the most scarce factors of production. The assumption underlying current concepts of efficiency is that labor is a scarce resource. This may have been true in a rapidly industrializing economy, but in situations where the marginal cost of labor is close to zero but all other factors of production are scarce, efficiency of fewer units of different sizes must be measured in terms of returns to the limiting factors of production and not to the farm operator's labor (Christian and Pepelasis, 1971). In looking at small farms from a rural development perspective, labor cannot be regarded as a scarce factor of production. The labor potential exists; the goal is to provide adequate returns to that labor given scarce resources such as land and capital. Land may be regarded as a scarce factor of production because of relatively small acreages possessed by current small farmers, and because of the high costs of acquiring more land. Small farmers are also notoriously short of capital.

Where labor is not regarded as a scarce resource, assumptions about highly capital intensive technology may also be reexamined, especially since 80 percent of agricultural income returns to capital and 20 percent to labor—a reversal of the distribution for the economy as a whole (Lianos, 1971). Machinery in the agricultural process is generally regarded as being labor-saving only. It substitutes capital for labor, but does not increase yield per acre, as opposed to chemicals which are generally regarded as land saving (Bieri, 1972; Perelman and Shea, 1972). There is evidence that mechanization tends to decrease yields, all other things being equal (Perelman, 1976). Moreover, efficiency figures which show increasing output per farm worker due to increased technology really indicate a *transfer* of labor from the farm to the factory since farm workers are aided by other laborers who manufacture farm equipment and other supplies (Perelman, 1972, 1977; Pimentel, 1973). This issue thus becomes, does society benefit by this replacement of farm labor by capital (Perelman, 1972)? Another questionable assumption is that scarce energy resources should be priced much lower than equivalent amounts of labor. Technological development which has substituted capital for labor has been made possible by vast inputs of cheap energy in the form of oil and natural gas (Perelman and Shea, 1972). More and more, energy inputs will have to be regarded as scarce factors of production (Steinhart and Steinhart, 1974).

Individual farmers also tend to violate certain basic economic assumptions, notably assumptions about the maximization of profit (Thompson, 1976). We have seen that small farmers have many positive motivations for remaining in farming other than economic gain. A 1966 study by North Carolina State University concluded that the established farmer has little tendency to withdraw from farming, even when under considerable economic pressure. A GAO analysis of the reasons for farm sales made during a review of major problems related to rural development in a 12-county area in South Dakota supported this conclusion (General Accounting Office, 1975).

Given the foregoing, it can be argued that the assumptions underlying the economic efficiency of large farms need not be accepted for small farms, particularly where rural development goals are paramount. The problem of low incomes for small farmers remains, however.

In order to accomplish the goal of increased on-farm income, remedies must be found for the basic problems which may beset small farmers. These will be listed along with a cursory presentation of solutions:

(1) *Farming a small quantity of land* (General Accounting Office, 1975; Boxt, 1976). The remedies are essentially only two—to increase the yields of those acres, particularly in terms of income, or to increase the amount of land farmed, which would require credit availability or leasing arrangements. In the former case, the use of ecologically based intensive cropping discussed subsequently could be important.

(2) *Farming poor, less productive land* (General Accounting Office, 1975). The remedy would be to improve the productiveness of the soil through soil fertility programs. This may involve the usual inputs of chemical fertilizer or the use of "organic" soil-building techniques such as legumes and animal and other waste products (Wolf, 1977).

(3) *Failure to use available technology and efficient management practices effectively, and improper use of farm resources* (General Accounting Office, 1975; Bost, 1976). The consensus of the GAO study was that the former was a primary reason many farmers have lower volumes of farm sales than they might have and a major factor limiting improvements in the farming operations of most small-farm operators who have not progressed. A University of Minnesota study which compared the earnings in 1971 and 1972 of dairy farmers with herds in given size categories found that although both groups had similar kinds and amounts of resources, the top 25 percent of the farmers earned from 4.9 to 7.8 times more in terms of labor earnings than the bottom 25 percent. It was concluded that efficient management of resources was a major reason for large variations in the earnings of dairy farmers (General Accounting Office, 1975). Incomes can be increased by planting a higher percent of land in crops, increasing productivity from production enterprises, shifting from low profit to higher profit enterprises, and increasing margins from products produced (Thompson and Hepp, 1976). Given the high capital intensity of production of many farm commodities, more highly labor intensive crops such as horticultural crops may be an area in which the small farmer may be able to compete more effectively (Bost, 1976).

(4) *Poor motivation with no desire to improve farming operations* (General Accounting Office, 1975; Bost, 1976). If people are unwilling to improve their farming operations, little can be done to help them, but evidence from a number of small farm projects shows that farmers are eager to accept assistance (U.S. House, 1976; Thompson and Hepp, 1976).

(5) *Shortage of available capital or inability to obtain credit to purchase production inputs or to expand size* (General Accounting Office, 1975; Marshall and Thompson, 1976). The remedy is policy to make publicly-subsidized credit available or use less capital intensive methods.

(6) *Purchasing problems* (Bost, 1976; Marshall and Thompson, 1976). Some of the economies of size available to large farmers can possibly be obtained by

smaller operators if they organize into supply cooperatives, assuming that dealers are willing to provide discounts and credit to cooperatives. The importance of these buying advantages has not been adequately investigated (Marshall and Thompson, 1976).

(7) *Marketing problems*—selling products at the wrong time or in the wrong markets or unavailability of reliable markets (General Accounting Office, 1975; Bost, 1976; Marshall and Thompson, 1976). A possible remedy is the formation of marketing co-ops, assuming they could produce large enough volumes to have some impact on the marketplace. Other possibilities are establishment of direct marketing channels including selling to consumer co-ops, roadside stands, farmer's markets, and pick-your-own arrangements.

(8) *Limited technology available for small farmers* (Bost, 1976; Marshall and Thompson, 1976). Agricultural experiment stations could carry out research to develop technology particularly suited to the needs of small farmers, as they did for large farmers (Marshall, 1976).

It is assumed that all of the above (except lack of motivation) would be problems of any of the Thompson and Hepp categories of small farmers to the extent that these farmers wanted to improve their on-farm income. Senior citizen farmers would very likely be unmotivated to improve. Rural resident farmers might be unmotivated to increase their on-farm income, since they may be farming as a hobby, or at any rate receive only a very low income from farming.

The foregoing problems have been identified by various states, which have established pilot programs to upgrade small farm operations. These programs have succeeded in increasing the incomes of small farmers using a variety of methods (General Accounting Office, 1975; U.S. House, 1976).

The Texas Agricultural Extension Service initiated the "Texas Intensified Farm Planning Program" as a pilot effort in 1969 to reach marginal farmers—those earning a gross farm income of less than $10,000 annually with those earning less than $5,000 receiving first priority. Among the farmers included in the analysis were full-time producers, part-time producers, and nonproducers (those who had physical limitations such as health or age). Programs were found to effectively assist all three groups. Trained and supervised paraprofessionals provided intensive educational assistance to these small farmers, and it was found that the small producers did respond to this input. As other farmers became aware of the program they began requesting inclusion into the program. Most importantly, agricultural income was increased; this was a basic criterion of the effectiveness of the project. In one county a tomato production and marketing program was developed which included establishing a local market within the community. Gross income was increased significantly. Similar results were obtained from marketing aid in other areas. For example, several counties developed feeder pig programs to benefit small farmers. Additional results from the Texas program were increased utilization of other government services. Over a two year period a 72 percent increase in the number of farmers utilizing services of the Soil Conservation Service was observed, as well as a 200 percent increase in those requesting help from the Agricultural Stabilization Service and a 42 percent increase in borrowers from the Farmer's Home Administration (Seastruck, 1976).

Programs to assist small farmers are also being carried out by the Tennessee Valley Authority. Programs for "Rapid Adjustment Farms" are designed to shorten the time required to develop solutions to the problems which are hindering agricultural progress. Criteria for acceptance into the program include possessing the farm resource base and the managerial skill to permit the business to become a viable economic unit. Investment per farm and acres of land owned increased significantly. Net farm income increased 10 percent over the four year period (Russ, 1976).

In the TVA project "Resource Management Farms" were designed to demonstrate farm production and management systems to help farmers increase their incomes. The participants are full-time farmers. Analysis of 213 records of demonstration farms between 1972 and 1974 shows that 65 percent had gross sales of less than $20,000 when they entered the program, with average sales of $9,250. By the end of their participation, 50 percent of the 213 farms had sales of over $20,000. Nearly 30 percent had at least doubled farm sales. Less than half of the operators added land, which increased 21 percent for all participants. A major part of the increased sales was due to greater use of capital, adoption of improved technology, and the use of more systematic management systems. About a fifth of the farms showed no improvement or even regressed due to age, health and limited management capability. Analysis of farms which began the program with net farm income above and below $2,000 showed that gross receipts increased 83 percent in the low income group, compared with 65 percent in the higher income group, suggesting that progress *can* be made on relatively small low-income families.

Part of the TVA program involves introducing new enterprises to farmers suitable to their situations. In addition to having limited land resources, many farmers have surplus family labor. Therefore, horticultural crops such as tomatoes, other fruits, vegetables, and ornamentals which have high income returns are well suited. Since the most important methods small farmers have for increasing income is to intensify production in high volume, high value enterprises, the presence of dependable markets is critical. The TVA developed the Northwest Alabama Feeder Pig Association, which has had a major impact on farmer incomes. Specific programs have also been designed to help the rural poor, emphasizing high value crop and intensive livestock enterprises as sources of income, and the establishment of family gardens and livestock production for home use. A study of small farmers in Virginia has shown that small farm incomes can be increased through better management, higher yields, and better resource use given the present enterprise choices of the farm operator (Order and Smith, 1977). Other small farm programs have proved successful in assisting small farmers improve their operations (Tennessee Valley Authority, 1972 and 1975; West, et al., 1975).

There is evidence, then, that small farmers can increase their income through improved practices, with education and assistance. Pilot projects in other states have demonstrated many of the same results (U.S. House, 1976; Schneeberger and West, 1972).

Other than the matter of economic efficiency, the main issue concerning upgrading small farms is the question of encouraging them as a means of producing rural jobs as compared with other types of job development. The question becomes: what are the costs and benefits associated with efforts to improve farm income, particularly considering possible alternative uses of the investment for rural development purposes? The USDA responded to the GAO's recommendation to assist small farmers by stating that resources should instead be directed to non-farm rural development for two reasons: the inefficiency of small farms and the supplemental nature of off-farm income (a primary reason that small farmers remain on the land). The USDA claimed that allocation of its resources was cost effective and that no future action regarding small farms would be suggested (General Accounting Office, 1975).

We believe that a middle ground is possible. We agree with the USDA that development of off-farm employment opportunities is an important goal and that the farm household's total income should be considered in planning government programs which help small farmers. However, because of factors such as age, skills, remoteness of location, or desire to continue farming, agriculture for many small operators seems to be the best alternative for improving their income and standard of living. Further, it is not known how many farmers working outside jobs would prefer to farm full-time were it economically feasible for them. In many areas of the U.S., nonfarm work will be very difficult to find or to develop, thus increasing the value of making farm operators more viable. Because of inadequate data, the potential benefits of extension programs for small farmers cannot be fully assessed, but GAO concludes: "Indications are that the cost effectiveness could be favorable, particularly of programs to assist farmers who have the potential to become full-time commercial farmers" (General Accounting Office, 1975, p. 22). In the Texas project, for example, ten paraprofessionals served almost 5,000 individuals (including farm family members) at an annual cost of only about $20 per person. This was considered to be highly cost effective (Seastruck, 1976).

Another argument used by the USDA against the cost-effectiveness of assisting small farms is that a large proportion of them seem incapable of improving their operations. Of course, the abilities and attitudes of farmers would affect success in extension work, but we have already seen that a large number of farmers, regardless of education, are eager, willing and able to respond to technical assistance. Furthermore, those farmers who are poorly motivated, or possess few skills, will certainly be difficult to train for jobs other than agriculture. There can be no doubt that a certain segment of the small farm population will most benefit from welfare programs; this in fact is part of the research task—to determine which farmers are willing and able to upgrade their operations, and which are not and require other human capital investments. For instance, very little information exists on the characteristics of senior citizen small farmers and their felt needs for assistance from the extension service.

In this section we have tried to show that assistance to small farmers is economically defensible because assumptions about economic theory can be questioned in terms of rural development goals, because small farmers *can* be helped to improve their incomes, and because encouraging small farms is a rational method for providing income in rural areas.

THE RATIONALE FOR A SMALL FARM POLICY WITHIN A NATURAL RESOURCES FRAMEWORK

There are indications that small farms, as opposed to large farms, can contribute to conservation of natural resources in several ways. To the extent that small farms can most optimally use organic production methods (i.e., substitution of legumes and animal waste for chemical fertilizer and cultural practices and healthy soil for pesticides and herbicides [Allaby and Allen, 1974; Wolf, 1977]), they will reduce energy consumption and environmental degradation (Oelhaf, 1976; Allaby and Allen, 1974). While relationship is not ironclad, the most intensive, ecologically-based agricultural production methods are most suited to small-scale farms. Research in California with an ancient method of intensive agriculture called the French Intensive Biodynamic method has shown that the method should produce, on the average, two to six times the U.S. national average of protein sources such as beans, grains and rice. The method could also produce two to 16 times the vegetable and soft fruit yields while consuming one-half to one-sixteenth the water and energy and one one-hundredth the human and mechanical energy once the soil is in balance (although the initial stages are heavily labor intensive; Shepard and Jeavons, 1977). The method involves digging and filling raised beds with organic matter and compost and closely interplanting compatible crops (Wolf, 1976). Aside from eliminating or greatly reducing energy inputs, such methods conserve another scarce resource (particularly scarce to small farmers)—land. Farm land is increasingly becoming scarce, particularly on the urban fringe where development is occurring rapidly and land is also becoming increasingly expensive (Belden and Forte, 1976). Ecologically-based intensive agriculture can be practiced in areas poorly suited to large-scale mechanized agriculture (Jeavons, 1977).

Even where such innovative cropping systems are not used, smaller, less heavily mechanized farms have been shown to produce greater yields per acre (Perelman, 1976) and greater net income per acre than large farms (Perelman, 1977). There is evidence that small farms also use less energy (Perelman, 1977) ; however, to the extent that small farmers are encouraged by extension programs to increase production by increasing inputs such as fertilizer, herbicides, pesticides and mechanization, this difference may disappear. Use of organic methods of soil fertility, pest and weed control are economically suited to capital-scarce small farms because they require less expenditure for inputs. Small farms do have the potential to use less energy for mechanization because they can use smaller, lower horse power tractors which burn less fuel (Pimental, 1973; Buckinham, 1978). A more decentralized system of small farms would save a great deal of the energy involved in transporting produce in refrigerated trucks across the country, and the energy involved in food process to the extent that consumers increased their consumption of fresh foods (Belden and Forte, 1976).

ALTERNATIVE POLICY DIRECTIONS

For purposes of discussion, four generalized viewpoints of scenarios for dealing with the small farm question can be outlined. The first two may be regarded as people-oriented solutions; small farmers are here seen to have little importance in the production of food for the country. The second two options are both people-oriented and food-oriented.

Scenario one equates small farms with poverty and believes the problem to be a welfare problem with welfare solutions. This was the general position of the U.S.D.A. in response to the previously discussed GAO report, and in some cases it is appropriate. For farmers who, because of advanced age, disability, or lack of education, are unable to benefit from attempts to help them improve their incomes through farming, a welfare solution is required, since many small farmers are living below the poverty line (Marshall and Thompson, 1976). Perhaps one option would be for the Soil Conservation Service to pay these farmers to put most of their land in cover crops to protect the soil. Marshall and Thompson (1976) conclude that in some case subsidizing people to produce food might be a better policy option than comparable expenditures on welfare or public employment, since experience with manpower programs has shown that jobs are expensive and difficult to create and maintain.

Scenario two recognizes a very strong attachment to farming among many small farmers and would assist them in improving on-farm income through improved farm management practices as well as off-farm income where it is appropriate. Many small farmers are older, and such a policy would allow them to stay on their farms and make a decent income. Marshall and Thompson (1976), using their definition of small farmers as "families or unrelated individuals whose incomes are no more than 100 percent greater than the official poverty threshold, and who receive at least one-third of their income from farming," found that 291,000 or 48 percent of the heads of small farm families in the U.S. are 55 years of age or older, including 65 percent of the heads of Southern small families. It is probably a mistake, however, to believe that as these farmers die, the problem will have been solved, since these farmers may very well have children who wish to farm. We saw in the first part of the paper that attachment to farming is not limited to older people. Further, there are many young people who would like to go into farming, but are unable to do so due to lack of land and capital (Thompson and Hepp, 1976).

Scenario three regards small farms as deserving a respected place within the agricultural system in the future, postulates that small farms have a unique role to play in agricultural production, and presumes that a small system can coexist with the agribusiness system, largely through developing supply and marketing coops and direct consumer marketing strategies. It is in this scenario that small farms could begin to be recognized for their abilities to use more ecological and less energy-intensive production methods. The smallest landholdings could concentrate on vegetable and fruit production and certain types of livestock production. Medium resource farms (in terms of land and machinery) could produce grain and livestock, possibly using organic methods and recycling livestock waste back into the soil. Large "agribusiness-oriented" farms would remain devoted to capital-intensive crops like grain and soybeans, a portion of which is produced for international markets, and a share of livestock and fruit and vegetable production. Small farmers in 1969 with less than $10,000 sales controlled nearly a third of the land, 44 percent of the tractors and 25 percent of the cattle. It could be argued it makes little sense to ignore them as food producers. The question which remains unanswered is to what extent can a large farm system and a small farm system realistically coexist? They would be in competition in many ways, and farm policy would have to deal with both. The question has been raised as to whether the U.S. Department of Agriculture, given its agribusiness orientation, is capable of administering both people-oriented and agribusiness-oriented policy (Marshall and Thompson, 1976).

Scenario four envisions a more radical restructuring of agriculture—a move to a decentralized, smaller-scale, labor-intensive ecologically-based agricultural system as a rational response to fossil fuel energy scarcity, other mineral shortages and high prices (see for example, Belden and Forte, 1976; Merrill, 1976). This type of agriculture could play a very important role in a future transition to a steady-state economy (see Buttel and Powers, 1978).

We now turn to a discussion of specific policy areas. Policy proposals and strategies for change differ in the extent to which they require or result in social change. At the minimal or no social change end of the spectrum are those policies which would aid farmers to increase their incomes through optimum management practices, using the same general inputs as larger farms. Next are policies which would facilitate more ecological production methods and small-scale technology. Intermediate on our continuum are policies which would facilitate new marketing methods and institutions, land acquisition and credit, and off-farm job development. At the high social change end are moves to change the tax laws and other policies which provide advantages to large farms over small ones; formation of new political coalitions, and development of a farm income policy which would provide decent incomes for small farmers.

Improving Farm Management Practices Through Research and Outreach

We have seen that the agricultural experiment stations and the U.S.D.A. have been criticized for focusing research on areas that benefit large farmers over small farmers (General Accounting Office, 1975; Hightower, 1972). We also saw in a previous section how a number of state pilot programs have been effective in improving management skills on small farms and in improving income. Title V of the Rural Development Act of 1972 was intended to initiate research and education beneficial to small farmers, but it has never been fully implemented (Congressional Record, 1976). Title V, "Rural Development and Small Farm Research and Education," states as one of its purposes to "expand research on innovative approaches to small farm management and technology and extend training and technical assistance to small farmers so that they may fully utilize the best available knowledge on sound economic approaches to small farm operations" (U.S. Senate, 1972, p. 36). These goals are to be accomplished through a nation-wide program of extension research, and development focusing on management, production techniques, machine technology, new products, cooperative marketing, and distribution. The U.S. Department of Agriculture, land grant colleges (specifically including the colleges of 1890), Agricultural Experiment Stations, and Cooperative Extension Service have primary responsibility. Just before final passage by the Senate, Senator Herman Talmadge, Chairman of the Committee on Agriculture and Forestry, further indicated Congressional intent: "It is the purpose to enable the families of these small farms to stay there and earn a good living, instead of joining the trek to the city or remaining behind in poverty" (p. 51).

An amendment to Title V, "Assistance to Small Farmers in Upgrading Their Farming Operations," was introduced in the House and Senate in 1976, and hearings were held. This bill is an outgrowth of the previously mentioned GAO report; it requires the USDA to conduct a study in order to establish a small farm extension program of research, marketing and management. The bill is aimed mainly at full-time farmers (U.S. House, 1976). In April 1976, the U.S.D.A. recommended that the bill not be enacted for reasons dealt with earlier. The bill has subsequently been re-introduced, but no further action has been taken.

Several state research projects are indicative of what could be done. A study in Kentucky used linear programming to identify possibilities for improving farm incomes on low-income, full-time farms given varying availability of inputs. Among their findings was that it is possible for operators of these farms to improve their net incomes substantially—particularly when farms emphasized labor-intensive crops such as tobacco, cucumbers, and peppers (Stewart, et al., 1976). Another study varied capital and labor requirements for various crops and livestock operations in order to obtain $7,000 or $15,000 incomes from 40 acre farms in Southeast Arkansas (Walker and Halbrook, 1976). Similarly Kelly and Justus (1976) examined the resources necessary to obtain a $7,000 income in Kentucky by varying inputs of land, capital and labor. Other research has attempted to evaluate suitable enterprises for limited resource farmers in Louisiana (Roy and Borderlon, 1974) and in South Carolina (Londhe, et al., 1972).

Marshall and Thompson (1976) propose that public research at the land grant colleges should focus on the following areas: factors contributing to efficient farm operation within any farm size category; types of farm products which are most suitable for smaller farmers and the most suitable techniques for producing them; structures relating to land-owning, credit and marketing that are most suitable for small farmers; the types of nonfarm skills that are most compatible with small-scale farming and how to develop them; methods for coordinating off-farm work in the public and private sectors with small scale farming; and investigating evidence from other countries with successful small farms. Their belief that the USDA has ignored the needs of small farmers is reflected in the fact that they also stress that public policy should support *private* research training and demonstration efforts by such organizations as the National Sharecroppers Fund and the Federation of Southern Cooperatives, who are investigating some alternative production methods, and that grants to public and private agencies be administered by a federal agency not controlled by the U.S.D.A. Also proposed are outreach projects to communicate research and development results to small farmers.

Use of Ecological Production Methods and Alternative Technology

The small amount of work that has been done in land grant universities regarding small farm management has tended to assume the same inputs—chemical fertilizer, pesticides, herbicides and the same general types of mechanization, livestock housing, etc.—as are used on large farms. An alternative line of research and extension would help farmers use more ecological and less energy-intensive methods. Organic production of crops which substitutes manure and legumes for chemical fertilizer and soil fertility and cultural practices for herbicides and pesticides (see Allaby and Allen, 1974; Wolf, 1977), as well as solar heating for buildings and development of smaller-scale technology particularly suited to vegetable and fruit crops and small livestock enterprises seem to be particularly useful. Organic farmers have been getting good yields (Lockeretz, 1977) with no help from land grant universities; it seems logical that they could do better with knowledge gained from rigorous research. The two-way relationship between small farms and resource questions is important because small farms—constrained as they are by limited amounts of land and capital—can benefit from the use of highly ecological methods because they greatly reduce the cost of inputs (Lockeretz, 1977) and using highly intensive methods can greatly increase yields (Shepard and Jeanons, 1977), both resulting in higher incomes. These methods in turn benefit society at large because they are less energy intensive, non-polluting and preserve soil quality for future generations. In addition to policy encouraging research in these fields, special tax breaks could be given to organic farmers and for use of equipment more suitable for small farmers (Marshall and Thompson, 1976).

Changing the Structure of Marketing

Small farms do not lend themselves easily to the type of marketing which prevails in a highly industrialized food system. Large food chains prefer to sign contracts with large farmers (Belden and Forte, 1976). More appropriate options for small farmers are: (1) competing for a share of market power by forming marketing co-ops to sell in the usual markets, or (2) direct marketing strategies such as farmer's markets, roadside stands, or selling directly to food co-ops. Fujimoto (1976) and Belden and Forte (1976) document the growing popularity of direct-marketing strategies. Several experiment station surveys have examined consumer use of direct marketing opportunities from the consumer perspective (Roy, Leary and Law, 1977; Stulmiller, Howe, and Stone, 1976) and from the producer perspective (Brown and Jordan, 1977; Metzger and Erhardt, 1976).

After hearings (U.S. Senate, 1976, U.S. House, 1975), The Farmer to Consumer Direct Marketing Act was signed into law by President Ford in October, 1976. It authorizes $1.5 million a year for two years to survey existing farmers' markets and their impact; compile laws, regulations, and legislative drafts on direct marketing; sponsor conferences on the subject; and work with state governments, individuals, and groups (P.L. 94–463).

In response to the problems of farmers who sell under contract to large corporations, Marshall and Thompson (1976, p. 80) propose a government sponsored structure to foster organization of small farmers and collective bargaining. They also suggest providing government-sponsored marketing facilities for small farmers "as alternatives to selling agricultural products in markets controlled by a single buyer."

More federal support for low-income cooperatives has been widely suggested (Marshall and Thompson, 1976; Belden and Forte, 1976). Low income cooperatives tend to experience problems with lack of volume, low prices, brokerage and marketing problems, undercapitalization and lack of managerial skills (Roy and Fallo, 1972; Roy and Leary, 1977; Marshall and Godwin, 1971; Londhe and Daniels, 1976). The success of co-ops appears to be facilitated by educational assistance and/or mixed membership of poor and more affluent members with a variety of skills (Marshall and Thompson, 1976).

Changing the structure of marketing is intermediate on the social change continuum because on the one hand it is something farmers can do and have done themselves, but on the other hand, direct marketing strategies, if organized extensively, can contribute to change in the structure of agriculture. The logical extension of highly successful direct marketing strategies would be more decentralized production of certain crops. According to Belden and Forte's scenario for change, decentralized production of vegetables and some fruits would have a salutary effect on small farmers and consumers; could be a key to promoting labor-intensive, small unit, environmentally-sound production; and would improve the nutrition of Americans through the consumption of more fresh fruits and vegetables. Depending on the extent to which decentralization occurred, a shift would take place away from very large, energy-intensive monoculture farms in California which use large amounts of pesticides and herbicides and depend on a migrant labor supply. In many parts of the country production is feasible only in the summer months, but a large number of small farmers reside in the South, with longer growing seasons.

Land Acquisition and Credit Availability

Land prices have risen greatly in the recent past, costs of all inputs have risen steadily, and capital requirements are almost prohibitive for a person wishing to start out in farming (Belden and Forte, 1976). Various types of land trusts have been proposed in order to insure that adequate land is available for farming at prices which are sensible in terms of potential returns to agriculture. Heady and Ball (1972) have suggested the following policy as a means of facilitating farm enlargement: the creation of public land authorities to purchase small farms as they become available for sale, then reselling them to other small farmers who want to increase their acreage. The Southern Cooperative Development Fund offered essentially the same program except that the Farmers Home Administration would be the administrator (Southern Cooperative Development Fund, 1977). The Saskatchewan Land Bank Commission has become a model for land bank proposals. Established in 1972, its function is to buy farms and *lease* them for 10 years at 5¾ percent of the land's market value with the option to buy after five years of a lease. The system allows farmers to avoid paying a large down payment, and preference is given to full-time farmers with a net worth of less than $60,000 and an average net income of under $10,000 for three years prior to application (Belden and Forte, 1976). The North Dakota Farmers' Union has developed a policy on land transfers based on the Saskatchewan experience (North Dakota Farmers' Union, 1975). On the national level, the Young Farmers Homestead Act was introduced in the House and Senate in 1976. The proposal would create a government land bank to purchase farm land and lease it back to farmers, with rents equal to property taxes and interest. After seven years the farmer could equal to property taxes and interest. After seven years the farmer could either purchase the land at 75 percent of its value or continue leasing. Hearings were held (U.S. Senate, 1976), but the bill died, and the bill was reintroduced in 1977 by Senator McGovern. No action has been taken to date. Another bill is the Family Farm Security Act of 1977, a loan guarantee patterned after a recent Minnesota law (Hyde, 1977).

It has been argued that existing credit institutions, including the Farmers' Home Administration, have not met the needs of small farmers (Marshall and Thompson, 1976; Greene, 1976). The system is believed to be biased against small farmers because large farmers are seen as better risks, even though smaller farmers have the ability to repay loans and interest and have lower rates of foreclosure and delinquency than large farms (Perelman, 1976). Suggestions include establishing a Rural Development Bank to provide credit to small farmers and for other rural development purposes (Marshall and Thompson, 1976). More favorable terms toward small farms could be required of public lending institutions such as the Federal Land Banks and the Production Credit Association (Southern Cooperative Development Fund, 1977), or only small farms could be permitted to utilize these sources of credit (Heady and Ball, 1972). Again, Farmers Home Administration could be much more effective in meeting the needs of small farmers.

Off-Farm Job Opportunities

Availability of off-farm jobs for family members increases the options of small farmers, many of whom can remain on their farms only with a supplemental source of income (Marshall and Thompson, 1976). Modest scale industry in rural areas could benefit small farmers as well as their neighbors (Tweeten and Brinkman, 1976, pp. 244–45, 252). Manpower programs could serve a complementary role, providing public service employment, better labor market information, and job training itself (Marshall, 1972). Lastly, a basic policy to increase the options of all rural people would be a true national commitment to full employment like that proposed by the Humphrey-Hawkins bill, with the government being "employer of the last resort."

Changing Tax Laws Which Disadvantage Small Farms

A number of policy proposals recognizes that small farms are disadvantaged by policies which favor large farms but which have nothing to do with economic efficiency at the farm level. We saw earlier that tax policies intended to simplify tax procedures for farmers have amounted to subsidies to land and capital rather than labor, thus disadvantaging smaller farmers (Marshall and Thompson, 1976). Tax laws have also encouraged entry into farming by corporations with largely non-farm income (Greene, 1976). In large integrated firms, if one unit in the integrated chain can enjoy favored tax treatment, combined profits from the integrated enterprise can be pushed into that favored area. For example, in a firm involving a ranch, a cow herd, a feedlot complex, and a slaughtering plant, it will pay to operate the slaughtering plant as a producer's cooperative, with only enough profit to provide incentive bonuses for management, and to do the same for the foodlots. All profits can be directed down the integration ladder and converted into capital by investment in improvements such as irrigation. When the cattle on the ranch are sold, any gain will be taxed at capital gains tax rates (Raup, 1973). A corporation can plant an orchard, but as long as there is no profit, it can write off these expenses from non-farm income when paying taxes. When the trees have matured, they can sell out the operation at a profit and declare a capital gain, thus being taxed at a lower rate (Perelman and Shea, 1972). Corporations may enter farming partly as a land speculation venture, as land prices are bid up. The small farmer can benefit from high land prices only when he sells out and ceases to be a farmer. However, corporations reap tax benefits from being in an industry with a low rate of current earnings while equity rises with increasing land values (Perelman, 1976). If these tax loopholes were closed, smaller farms would be in a less disadvantaged competitive position (Barnes, 1976; Perelman and Shea, 1972; Marshall and Thompson, 1976). "Tax loss farming" could be minimized by prohibiting corporations from gaining tax credits by writing off agricultural losses against profits earned in other areas of business. To reduce speculation, a tax could be levied on increases in land values resulting from other than improvement of the land or increased economic value of the land due to increased earning; owners whose major source of income is from agriculture would be exempt. Net profit from the sale of land could be taxed as ordinary income (Greene, 1976).

There are those who would prohibit large corporations from agriculture. Senators Gaylord Nelson (D-Wisconsin) and James Abourezk (D-South Dakota) have introduced and reintroduced an amendment to the Clayton Antitrust Act which would ban participation in agriculture of anyone with over $3 million in assets and/or those not directly engaged in farming (Belden and Forte, 1976). To date, no action has been taken. Several states already have passed laws forbidding or limiting corporate agriculture, including Kansas, Minnesota, Nebraska, New York, North Dakota, and Oklahoma (Morrison and Krause, 1975).

The Role of Coalitions in Formation of a New Farm Policy

In order to advance the interests of small farmers it has been argued that new political coalitions are necessary. The Exploratory Project for Economic Alternatives (Belden and Forte, 1976, p. 34) envisions a new coalition of interests to change the structure of agriculture. "Consumers, small farmers, nutritionists, environmentalists, farm workers and community control activists can find a unity of interests in achieving low food prices and a decentralized, safe and ecologically sound food production and marketing system." Belden and Forte document the impressive inflation in food prices in the last 15 years and the highly regressive impacts upon low and middle income groups—the majority of Americans. Further, inflation is projected to become *worse*, due to resource shortages and rising costs of agricultural inputs, increasing world food demand, increasingly monopolistic control of the food industry, and increasing reliance by consumers on food eaten away from home and on highly processed food. All this contributes to a climate of responsiveness to change in food policy. Belden and Forte and Shepard and Jeavens (1977), present evidence of consumer dissatisfaction with the food system and increasing interest in alternatives to an agribusiness-dominated food system. Direct marketing arrangements which favor both farmers and consumers is one way to begin building coalitions. Another possibility is a national farm policy which would favor both family farmers and lower income consumers, instead of pitting the two against each other, as has too often been the case historically. Agricultural policies such as market orders and crop limitations have served to maintain price levels for farmers at the expense of consumers (Belden and Forte, 1976).

A new policy direction would utilize direct payments to farmers to meet an equitable target price and would pay for it with a progressive tax system. Such a plan was proposed in 1949 by Secretary of Agriculture Charles F. Brannan. Brannan began with an *income support* goal, and calculated target prices for various crops needed to maintain this goal. Perishables were included along with the basic commodities, with the government paying the farmer the difference between the market price and the target prices. The plan shifts the burden of food costs from consumers to taxpayers, resulting in more equity only if the tax system is a progressive one. Similar policies are in effect in Sweden and Britain (Belden and Forte, 1976). An important feature of such a plan would be a limitation on the size of farms to receive payments, since it is widely acknowledged that government price supports and other price regulatory policies have had the effect of benefitting large farmers at the expense of smaller farmers (Shepard and Jeavons, 1977). Pearlberg (1972), and that government farm policy sped up the decline of the small farm in this country, since it was the large farmers or those who could assemble large farming operations who were able to profit most from the capital and security provided by government subsidies (Tweeten and Brinkman, 1976). One study by the legislative reference service of the Library of Congress concluded that farms with over $40,000 annual sales would face proportionately larger financial difficulties if price supports—direct and indirect—were discontinued by the government (Perelman, 1976).

Other aspects of a farm policy are recommended. Separate marketing orders from the goal of supporting farm income offers a valuable tool for rationally planned marketing and could be used to control and smooth out the supply of produce that comes to market. Marketing boards or agencies would provide a mechanism for dealing with artificial ripening, speculative hoarding of crops, mismanagement, and energy issues such as using more energy-efficient retail transit instead of trucks (Belden and Forte, 1976). If the federal government were to buy food for its school lunch, breakfast, and commodity programs from small and medium sized growers, it would amount to billions of dollars of income. Instead this buying benefits largely the largest food processors, since almost all government-procured food is processed (Belden and Forte, 1976).

Policies to encourage environmental goals could be built into a new farm program. For example, the Brannan plan included requirements for farmers to use soil conservation practices to be eligible (Belden and Forte, 1976). Tax policies could theoretically be used to achieve incentives toward whatever goals could be agreed upon. For example, Marshall and Thompson (1976) have recommended encouraging importation of technology suitable to the needs of small farmers which has been developed in other countries, taxing large energy-intensive technology, and giving tax breaks for ecologically sound practices and use of less energy-intensive practices.

The future direction of small farm policy will undoubtedly depend on the political constituency that can be developed to support it, and the strength of new coalitions vis-a-vis the vested interests which may be threated by a changing structure of agriculture. In this paper we have tried to establish a rationale for the need for small farm policy based on rural development and environmental goals, and to describe some of the possible components and directions of small farm policy.

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TABLE 1.—ON- AND OFF-FARM INCOME BY FARM TYPE, 1974 MICHIGAN SURVEY

	Rural resident	Supplemental income	Senior citizen	Full-time	Total small farm
Net cash farm	$50	$3,080	$1,930	$4,750	$2,299
Transfer payments	144	1	2,933	249	594
Investments	394	155	1,373	176	444
Other income pensions		12	771	216	31
Wages	10,878	8,861	1,353	1,166	6,631
Net family income	11,466	12,109	8,360	6,557	10,149
Per capita	2,874	2,667	3,981	1,946	2,721
Percent reporting income between:					
0 to $2,500	1	3	12	17	7
$2,501 to $5,000	4	3	19	30	11
$5,001 to $7,500	16	11	19	15	15
$7,501 to $10,000	17	15	16	19	17
$10,000 or more	61	68	35	19	50

Source: Thompson and Hepp (1976:13).

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NEW DIRECTIONS FOR QUALITY OF LIFE RESEARCH

(By Richard G. Stuby*)

INTRODUCTION

The quality of life for rural people has long been of interest in the U.S. Department of Agriculture. It has run as a major theme through publications of ERS and its predecessor agencies since 1919. This rich tradition includes: research on farm-operator level of living, farm incomes, and rural poverty; the institutional concerns for rural health care, housing, education and community services; and the more recent concerns for energy and the environment. The focus was on rural people as farmers at a time when "farm" and "rural" were essentially synonymous. It shifted to include rural nonfarm people as the occupational structure in rural areas has been altered by the "agindustrial revolution" and the urbanization of America.

Research on quality of life issues has changed character as social needs, the level of academic knowledge, and research capabilities and administrative policies have changed; but, it has been pervasive in one form or another within ERS. In addition, it continues to receive attention by agricultural leaders in nongovernment roles.

Despite this tradition of research, however, no one has been successful in coordinating and unifying quality of life research to yield a comfortable accumulation of knowledge under the bibliographic heading of "quality of life." While it is pointless to argue who is to blame for this state of affairs, there is a need to carefully evaluate directions and priorities for quality of life research in the late 1970's and project them to the next decade. For our society has moved from a feeling of wellbeing based on the economic growth and affluence of the 1960's, to a feeling of anxiety over the possibility that the very quality of human existence can rapidly deteriorate. This paper will examine what the author believes to be the major issues for quality of life research at this time. It will suggest some directions and propose some priorities within the limitations that thoughtful readers will readily recognize.

"What is quality of life?" We need not attempt a universal definition for there may be no consensus on any definition proposed. Rather, we should view the concept of quality of life from several perspectives. The intent is to tackle the first problem mentioned by Carl C. Taylor in the prologue to this paper; that is, "knowing what is most important to discover." Then we can look at several policy and research contexts relevant to quality of life and begin to address Taylor's second problem of "knowing how to go about discovering it."

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* Sociologist, Economic Development Division, ERS.

Let us briefly compare what economics, sociology, and psychology say about quality of life and then show how they cut across the current social research and policy issues as development, environmental concerns, and technology assessment.

Economics tends to view quality of life as the product of economic growth and full employment which leads to an income sufficient for buying the goods and services that condition the life quality for any given individual or group.

Sociology has two distinct viewpoints on quality of life. One view is that quality of life is a product of the proper interfacing of social institutions as they act on individuals. The major focus is on the functioning of the social system. In contrast, the other view focuses on the functioning and coping of individuals within given social systems. Here, quality of life is viewed as a product of both the social system and individual adjustments to it, but the major focus is on the coping mechanisms at the micro-social level.

Psychology simplifies these viewpoints a step further by emphasizing the adjustment of individual personality to various stimuli in the human environment without being overly concerned about how the stimuli are organized in either sociological or economic terms. Quality of life is viewed as adjustment to a host of stimuli including those of major concern to both economists and sociologists.

These several viewpoints are highly abstracted for comparative purposes. All are directed to a human condition loosely termed quality of life, but none of them treat it comperehensively.

Research and Policy Contexts

One could jump to the well-worn conclusion that we need interdisciplinary research on quality of life issues; that an appropriate mix of economists, sociologists, and psychologists would produce the best research. Such a conclusion has been reached repeatedly but ensuing attempts at interdisciplinary research have not had notable success.

Perhaps a different strategy is in order. An examination of quality of life issues against three pertinent research and policy contexts—development, the environment, and technologicial assessment—may lead to some conclusions about a strategy.

Whether development be modified by the adjectives "economic," "rural," "community," or "area," it refers to the processes of orderly change and restructuring of human systems to meet human needs. Quality of life then, is a major, and perhaps *the* major goal of development activities, and thus, the ultimate dependent variable in development research. All basic social sciences bear on the processes of development and on such multidisciplinary and applied fields as planning and management. Thus, development represents a nexus of interdisciplinary efforts, all based on the underlying assumption that quality of life is a function of development ($QL=f(D)$).

A second research and policy context relating to quality of life issues involves environmental concerns. Many different versions of environmental-ecological issues come under the idea that quality of life is a function of the environment ($QL=f(E)$). Environment is written here with a large E just as development is written with a large D, because there are numerous versions of the concept of environment. These include the physical, social, and esthetic aspects which are viewed as occurring in interrelated systems.

Paradoxically, problems of the environment often collide with those of development. What is good for development may be bad for the environment.

This paradox is further confounded by the third research and policy context technology assessment. There can be little argument against a general statement that quality of life is a function of technology ($QL=f(T)$), for the development of technology has been in the mainstream of human history and is the foundation of modern society. But since technology interacts with both the developmental and environmental contexts, increased technological development may or may not mean increased economic or social development.

In fact, a major stimulus for technology assessment has been the degenerative effects, both realized and potential, of technological developments on environmental quality and hence on the quality of human life.

Quality of Life As A Dependent Variable

A logical step would be to pull the above assumptions together into a general model that would express quality of life as a function of development, environment and technology ($QL = f(D, E, T)$) and begin to analyze the complex interrelationships and interactions on the right side of the equation. This may be a necessary and ultimately crucial task. But it is one that must await further methodological research with respect to the left side of the equation. Further refinements in measurement, indicator construction, and data development are needed here first. Without appropriate dependent variables, there can be no valid empirical determination of relationships or theoretical closure of the independent variables that are the substance of numerous current research efforts. The problems with research on quality of life issues are not necessarily matters of proper interdisciplinary mix. Quality of life research does not suffer from the lack of attention by the academic and the bureaucratic worlds. Rather, it suffers from a misplaced attention on the independent variables or causes and a lack of agreement on what kinds of indicators should be used to measure effects. If quality of life is the most important dependent variable in development, environment, or technology research, there must be valid, precise, and useful operational measures of life quality that can be used across a broad range of research projects; whether conducted by economists, sociologists, psychologists, political scientists, or any combination of these.

Indicators of the Dependent Variable

Focusing then on quality of life as a dependent variable, social scientists must devise indicators of life quality. Yet attempts to address the quality of life issue quickly become frustrated not only by lack of conceptual agreement among social scientists, but also because there seems to be no convenient empirical common denominator for quality of life. A person's wealth can be measured in dollars or his lifetime in years but there is no common unit to measure a person's quality of life. One person's idea of a high quality life, with high levels of satisfaction and well-being, may not coincide with another's ideal.

Thus the immediate issue is not the conceptual: What is quality of life? But rather the philosophical: Who shall judge quality of life and by what criteria should it be judged? Without some agreement on the philosophical base from which to start, the conceptual issue can never be resolved.

Two distinct types of dependent quality of life variables may be discerned in actual social science practice and both relate to the philosophical issue just described. The first type involves the outcomes—at the institutional level—of the collective decisionmaking in both the public and private sectors of society. The other involves the impact of these institutional outcomes on individuals in society.

Institutional level variables. We are more familiar with institutional output variables. They are measures of institutional performance and are reported as basic governmental and other institutional statistics or data series. The outputs are sensed in terms of jobs, housing, education, health services, community facilities, credit, consumer goods, clean air and water, energy supplies, public safety, and so on. The data from which the outcome indicators are developed are largely enumerative in character and can be aggregated to local, State, regional and national totals.

In some discussions on quality of life many of these institutional outputs are viewed as necessary conditions for achieving quality of life. Without argument over the semantics of "necessary," it can be said that without at least a considerable number of the institutional goods and services, an individual's life would not have much quality. And so, on the assumption that some given level of institutional outputs will in turn produce individual quality of life, social scientists often take a conceptual shortcut by using institutional outputs as indicators of life quality while ignoring the actual impacts of institutional outputs on individuals.

However, such shortcults may lead to a short circuit in the feedback mechanism from the institutional structures to the public and private decisionmaking centers such as Government agencies, business and industry, professional, trade and community associations, unions, and other special interest groups.

When institutional outputs are used as indicators, the response to perceived deficiencies in quality of life is quite predictable. A numerical lack of some institutional output is corrected by producing more of it. For example, if it is noted that some communities lack health delivery systems, efforts are made to increase the number of health service units such as clinics or hospitals or the number of health practitioners. Or if it is noted that some people live in overcrowded or otherwise unsatisfactory housing, efforts are made to build more housing units. If quality of life is measured by some numerical quantity, the quickest response to the quality problem is to increase the quantity of institutional output.

There is a certain inescapable logic here, but three serious problems ensue. First, many of the institutional output variables are highly aggregated and insufficient attention is paid to their distributional effects.

Second, there is inadequate means for judging what level of institutional output is good, bad, adequate, or sufficient. To the extent that normative judgments are made, they are often made without empirical data.

Finally, there is no mechanism to define the appropriate mix among various institutional outputs for achieving life quality. What levels of which institutional output are necessary for quality of life at some specified level? What substitutions or tradeoffs can be made? What is the value of one unit of one output to one unit of another output? Without some measure of quality of life that is independent from the measures of institutional outputs themselves, the equations inherent in the above questions are unsolvable. Institutional output variables do not measure the quality of life actually lived. Rather, they are germane only to their own institutional context and thus, while necessary, they are terribly insufficient indicators of life quality.

Individual level variables. The second set of dependent variables used as quality of life indicators comes from the subjective estimates given by an individual in regard to his own life quality. It is possible to convert these subjective interpretations into objective quantitative indicators of institutional outputs actually received. Several recent volumes demonstrate that there are ways to do this (*1,2,3*).

Indicators derived from subjective estimates have profound implications for many kinds of social science research. These indicators can compensate for the distributional, the appropriate mix, and the normative problems of institutional output indicators.

Institutional performance measures may accurately assess the aggregate amount of an output available to people, but they may not measure the extent to which the institutional output is actually received or how this product is evaluated by various individuals. Subjective estimates of quality of life permit assessment of both the distribution of the institutional output and its impact on people's lives.

Closely related to the distributional problem is the problem of appropriate combination of institutional outputs which affect quality of life. Most indicators of institutional performance are not involved with this issue for they are concerned mainly with their own affairs and not with the relationships between institutions. Subjective estimates of life quality, on the other hand; can be used to examine the interinstitutional relationships and assess their balance.

This capability can also be used to judge the substitutability of one component for another; in other words, to define equity in tradeoff situations. Judgments of equity from an institutional viewpoint must be interpreted cautiously because of the opportunity for self-serving appraisals. Individuals, however, can legitimately speak to the point of equity in tradeoff situations. Let us examine residential preferences as a case in point. Subjective estimates of life quality about desirable community size and amenities reveal tradeoff preferences across many institutional dimensions such as income, housing quality, health services, and educational systems. Whether or not the income foregone by living in a small town is balanced by the esthetics of the environment can be determined only from the evaluations of individuals who have actually experienced the tradeoff or who have accumulated enough information to vicariously experience it. Aggregate indicators, based on such evaluations, can reveal the nature, strength, and homogeneity of these preferences. In turn then, the desirability of various policy options about residential patterns may be inferred from these indicators.

The most important use of the subjective estimates of life quality however, is as a normative feedback mechanism from the individual, who receives institutional outputs, to the institutional output system itself. A major concern within the social indicators movement has been the issue of how to determine what is normative in terms of the measures of system performance. In other words, at what point on the scale of an institutional output indicator is the variable basically "good" as opposed to basically "bad?" At what level of the variable should a person or family become eligible for a given program?

Scientists often shy away from normative judgments or exhibit great anxiety in making them. Yet much research done by social scientists for government policymakers is either implicitly or explicitly evaluative, and any evaluative exercise must have some independent, normative standard by which the empirical reality is judged. The question is: What will be used as the normative standard in quality of life research and who will set it? In current practice, normative standards are sometimes the reserved prerogative of the policymaker. At other times the normative standards are agreed on by panels of scientists or other experts. Often however, there is no inductive logic available to assign a normative standard. It is then that inductive inferences drawn from the perceptions, satisfactions, and experiences of the individual become valuable. They can provide the basis for a sound, rational, and scientific determination of normative standards for public policy.

This is not to suggest that the opinions and insights of policymakers, scientists, or other experts should be ignored, but only that normative distinctions drawn from the perceptions and experiences of individuals also be explicitly considered in policy formation. What is good housing? What is clean air? What is an adequate income? What are sufficient employment opportunities in a community? Subjective estimates by individuals can help answer these questions.

The issue of normative indicators reveals a confusion in the interpretation of the two terms "objective" and "subjective" as they refer to social indicator usage and social science data. The estimates made by an individual are indeed subjective, but the data compiled from these estimates may be interpreted and analyzed as objective, rational, "hard" data. It is a great irony that subjective data can be used to make scientifically objective inferences while the so-called objective data often must be given a highly subjective normative interpretation.

In conclusion, it can be seen that both institutional output data and individuals' subjective estimate data are required to deal with quality of life concerns. Obviously, current institutional measures should not be abandoned for they reflect necessary inputs to an individual's quality of life. However, we must recognize that these measures do not present a complete or clean picture for quality of life research. Thus, it is asserted here that experiential data based on the attitudes, opinions, perceptions, satisfactions, and judgments of different individuals are a necessary complement to the enumerative data more commonly used to indicate quality of life. These experimental data add the weight of normative judgments from the population. They directly address the issue of the distribution and impact of institutional outputs and they provide insight into the appropriate mix of institutional outputs and the substitutability among these outputs.

ON "KNOWING HOW TO GO ABOUT DISCOVERING . . ."

The second problem articulated by Carl Taylor in the prologue to this paper is "knowing how to go about discovering" those facts that are important. If ERS is to deal with the important concept called quality of life, it must deal with subjective estimates of life quality as a necessary set of dependent variables. And so the issue becomes: How do we develop scientifically objective indicators of life quality from subjective data?

Taylor's observation that every science is limited more by its techniques and its technologies than by its phenomena is relevant to this problem. There has been some skepticism as to the scientific efficacy of attitude and opinion research. However, this skepticism can be negated to a large extent by recent advances in the techniques by which data dealing with subjective estimates of life quality are collected and analyzed.

Most of these data are collected by social surveys. In the past, survey research was often constrained because survey data were of low quality, incomplete, or relied on low order measurement. In recent years however, two important trends have been converging to meet this problem. First, analytical techniques have been developed to effectively utilize the nominal and ordinal data inherent in social survey research. These techniques include multivariate nominal scaling, multiple classification analysis, discriminant function analysis, and multivariable contingency analysis, all of which have been developed in conjunction with computer technology.

Second, there has been the increased use of communication and computer technology in data collection. This performs two interrelated tasks. It permits the collection of more detailed data, which permits the use of more sophisticated, higher order measurement techniques and it gives the researcher more options in his research designs. This new technology provides for flexibility, speed, and efficiency, whereas past survey research generally left much to be desired in these areas. A recent ERS survey has used one version of these survey techniques. A brief description of the general process may illustrate its capabilities.

A sample of 2,400 adults was interviewed via long distance telephone (WATS) lines in late May to early June, 1976. A complicated interview schedule was stored in a computer memory. Interview questions were displayed in proper sequence on CRT (television screen) devices. The interviewer read the question from the CRT and immediately keyed responses back into the computer. This procedure allowed for complex edit checks, intermediate data tabulations, and a clean data tape as soon as the interviewing was completed. The laborious and error-prone editing of hard copy questionnaires, coding, keypunching, and data verification were bypassed. The total time expended, from the start of interviewing to the completion of a clean data tape, was about 4 weeks.

The use of telephones limits surveys to households with phones, but this does not present a serious problem since about 94 percent of the U.S. population can be reached by telephone. In fact, this problem is more than offset by the sampling flexibility and control that can be achieved. Random digit dialing can insure representativeness in the sample. Simple screening of respondents can quickly isolate samples from relatively rare populations (for example, recent urban to rural migrants) or isolate purposive samples of various kinds. Sampling rates can be varied to enhance sampling efficiency while assuring adequate statistical reliability. Furthermore, since the execution of the sample design is under the direct and continuous control of the researcher, problems with interviewers subverting the sample design are virtually eliminated.

Interviewer performance can be monitored and corrective action taken if necessary. By linking the telephone interview to the computer, some of the load is taken off the interviewers, thus allowing them to concentrate on the questioning rather than on the mechanical manipulations of the interview schedule. Since the computer keeps track of the question sequence, complex conditional sequences of questions may be used which add or delete questions depending on previous response. This allows for in-depth probing and detailed measurement techniques.

If it is true, as Taylor said, that "All sciences, even the most exact sciences, are limited by their techniques, and especially by their technologies, far more than by their phenomena," then many of the limitations to the effective development of quality of life indicators have been removed. The study of quality of life phenomena is no longer severely constrained by its techniques, but instead presents opportunities for meaningful policy research.

IMPLICATIONS FOR ERS

Having come this far with the polemics on quality of life research, permit the author one last rhetorical question. "What should be the future role of ERS in quality of life research?"

Without attempting to catalog all of the ERS research activities relevant to quality of life, certain kinds of research are worthy of mention. In recent years, we have seen interest in environmental studies, technology assessment, energy research, migration turnaround, State and local government activities, and a host of research areas under the aegis of rural development. These last include studies of income, manpower, housing, health and education, community services and facilities, regional analysis, and industrial location. Some of these activities represent single program areas while a number crosscut several program areas and others are only part of a program area. However, each of them seems to be reasonably well institutionalized in the current ERS. Most important, however, is the fact that these research activities, which relate to development, environment, or technology, also relate to quality of life.

As a response to the general need for social indicator data the Economic Development Division (EDD) has initiated a long-term project designed to provide indicators relevant to rural development research in fields such as energy, health, and housing. Similarly, the Natural Resource Economics Division (NRED) has indicator-research programs dealing with environmental quality that attempt to relate the social and psychological aspects of environmental quality to environmental programs. Both the development indicator and environmental quality indicator research efforts are important first steps toward ideal quality of life indicator research and together they provide a sound basis from which to proceed.

This basis is further enhanced by several unique attributes and capabilities of the ERS structure that would enable it to produce excellent research results:

A long and venerable tradition of research that could be described by no better term than quality of life research. For what other reason do we research the production and distribution of food and fiber except that these are essential to our life quality?

A geographic, rather than an institutional, orientation which allows for multivariable, comprehensive studies of geographically distributed social and economic phenomena, particularly those related to the nonmetropolitan areas. On the other hand, for example, the Department of Labor and the Department of Health, Education, and Welfare are concerned with the vertical integration within their institutional domains, rather than the horizontal integration of several institutions at community, county, State, and regional levels.

A tradition and a capability for measuring and predicting trends has been instrumental in developing viable data systems and analytical systems related to agricultural production and marketing. These same abilities must be viewed as valuable resources in quality of life indicator development.

These attributes put ERS in a unique position for becoming a leading Federal agency for developing life quality indicators, devising systems to monitor these indicators, and producing timely and accurate information on quality of life, particularly for the nonmetropolitan areas.

The greatest obstacle that ERS may encounter in conducting the above tasks is a common one: lack of data. Data acquisition and evaluation become the first tasks if we are to seriously embark on further quality of life research.

In evaluating current ERS data resources, one is impressed with the sheer quantity. In EDD alone, the data files contain over 61,000 variables for each of over 3,000 county units in the United States. In the face of this it would seem almost ludicrous to suggest that we need more data. Indeed, one can detect a strong sentiment within ERS that too often we emphasize data as an end in itself.

Whatever the merits of this sentiment however, the argument in this paper is not to abandon these valuable data or redundantly add to them. It is rather to develop other kinds of data which can act as the catalysts to better analysis, stronger inference, and more interpretable reporting. If a sociologist may lean on microeconomic theory, the marginal utility of data based on subjective estimates of quality of life is sufficiently high to warrant investment in their systematic acquisition.

The second group of tasks to be faced is the development, construction, and testing of quality of life indicators based on, or relating to, the complete spectrum of data from the aggregate level to the individual level. However, these tasks cannot be separated from those of data collection. There is a necessary articulation and integration of the data collection and analysis tasks that must be respected if we are to do meaningful quality of life indicator research.

The conclusions and the position of this author are obvious. ERS should expland its efforts to develop indicators of life quality that are germane to a variety of research-policy contexts in the agency. This ultimately will require the acquisition of new data along with the commitment of additional resources to the research task. Although it is beyond the scope of this paper to address the organizational issues raised by these conclusions, it is assumed here that several alternatives do exist. These alternatives should be delineated and carefully considered in future ERS research planning. If we are to continue to use the term "quality of life," we must learn to use it quantitatively, precisely, and analytically. This not only befits the image of a research agency, but it also benefits the communication between social science and public policy.

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EXPLORATORY PROJECT FOR ECONOMIC ALTERNATIVES,
Gardiner, Maine, April 18, 1978.

Hon. PATRICK J. LEAHY,
United States Senate,
Washington, D.C.

DEAR SENATOR LEAHY: Thank you for your letter of April 5th on the forthcoming hearings on nonfarm rural research.

I think that such hearings are an important step toward addressing the human and social crises in rural communities that are far too often overlooked in the Department of Agriculture's research efforts.

In addition to the areas addressed in the outline, and the discussion of specific research projects that I expect would flow out of them, I think that attention should be drawn to the question of: What are the implicit or explicit *strategies*, if any, for rural development upon which current and proposed nonfarm research is based? This is a crucial beginning point. My guess is that however nonfarm research is defined, it is in fact primarily a series of ad hoc projects that are not aimed at testing or exploring development strategies. Without a strategic context, the pieces of research do not build on each other and tend to be isolated and of very limited use. Moreover, they do not perform their function of helping governments, individuals and community organizations at the state and local level to develop insights and knowledge that will help them make strategic choices about their future.

For example, the most common rural economic development strategy is simply to attempt to lure footloose industries and services to locate in a specific area in order to create local employment. Sometimes this is successful, most often it is not because of the fierce competition between localities for the handful of businesses seeking to relocate. Another strategy is based on development of local resources—i.e., creating jobs through the internal development of an area's natural resource base.

Another strategic question deals with the need for greater self-sufficiency on the part of nonfarm rural people to allow them to substitute goods and services produced through their own labor for the commercial goods and services whose prices have been inflated by the urban market. A key element in this, of course, is the creation of cooperative self-help systems. There have been a huge number of such systems attempted in the last half-dozen years. And for the most part the Department of Agriculture has been indifferent or hostile. What have we learned from these efforts? What is the Department doing to disseminate what we have learned?

Other strategies relate to energy. How are rural people going to prepare themselves for the expected skyrocketing energy prices in the 1980's? Given the dependence of rural access on the automobile, what is being done to develop energy-saving transportation systems? What is the cooperative extension doing to equip people with strategic skills to prepare them for higher energy prices?

Another strategic question centers around land use and land abuse. Rural states and rural districts are often woefully ignorant of ways of developing economically sound development systems and of seriously researching claims and counterclaims on the issue of jobs versus the environment. It is worth noting, for example, that economic criteria are almost totally missing in that debate, which means that unrealistic claims of job generating potential of one investment or another become factored into the decision-making process. What research is the Department undertaking to provide insights for local people into that economic trade-off issue?

Finally, the Department should be pressed on research into the institutional obstacles to development. Monopolistic land ownership patterns, real estate speculation, education oriented to urban values, lack of confidence, are some of the obstacles that everyone who had attempted rural development has run into. If these are important obstacles to development, then they should have a priority in the Department's research.

Since we are both on the Board of Directors of Rural America, I am sure that Fred Schmidt has provided you with the names of most of the people who would be on my suggested list of participants. But here are a few more who I think might make a contribution to your effort:

Arthur Blaustein, Economic Development Law Project, 2150 Shattuck Avenue, Berkeley, Ca. 94704, phone: (415) 548-2600.

Michael Schaaf, an expert in cooperatives, whose report I am enclosing. His address is: P.O. Box 214, R.R. 1, Pleasant Hill Road, Freeport, Maine 04032, phone: (207) 865-4037.

Rick Applegate, a lawyer and environmental planner who, among other accomplishments, has done a great deal of work in resource trusts. I am enclosing a report he had done for our project. His address is: Center for the Public Interest, Inc., P.O. Box 931, Bozeman, Montana 59715, phone: (406) 587-0906.

David Vail, an economist at Bowdoin College with a wide background in rural development. His address is: Dept. of Economics, Bowdoin College, Brunswick, Maine 04011, phone: (207) 725-8731.

Jonathan Falk, an economist and forester who could provide first hand knowledge of the abuse of land and people in the rural woodland areas of Maine, and might suggest the kinds of research that would be relevant to efforts to change those conditions. His address is: 6 Pond Street, Orono, Maine 04473, phone: (207) 866-4710.

I hope this will be of use, and again, congratulations on beginning a much needed inquiry into this important area.

With every good wish.

Sincerely yours,

JEFF FAUX,
Co-director.

COOPERATIVE EXTENSION, UNIVERSITY OF CALIFORNIA,
Davis, Calif., April 18, 1978.

Re: May 4 & 5, 1978 hearings on the Status of Non-Farm Rural Development Research Within USDA and the State Land Grant System.

Senator PATRICK J. LEAHY,
United States Senate,
Washington, D.C.

DEAR SENATOR LEAHY: I appreciate receiving information concerning the Hearings on May 4 and 5 regarding non-farm rural development research.

As I read over the hearing outline I became very excited because I wish time permitted me to be involved and comment on all of the items. Needless to say, this is not possible, so I would like to refer to two items. Although they may not be mentioned specifically in your outline, they do have a bearing upon it.

The first concerns rural development research within the land grant system. It is true in some states this has had a slow beginning and it has been difficult to get research that took a look at the non-agricultural aspects of the rural areas. Nevertheless, this has changed drastically over the last few years. It has especially changed since the Rural Development Centers have been established through funding from Title V of the 1972 Rural Development Act. These Centers have all been involved in identifying research needs and have begun to play a real catalytic kind of role in getting the kind of research done that is needed.

In regards to this aspect, I have attached a paper I have prepared for the Extension Committee on Planning. This paper was developed to give Extension's view of the kinds of research that need to be done within the land grant system. This is a preliminary paper. A more complete draft is now being put together by a committee composed of the heads of the Rural Development Centers, myself, and individuals from 2 or 3 other institutions. When this is completed it will go to ECOP for their final approval. This first paper was done by me, for the committee, so I feel free to send it to you. It may be of some value.

I am also sending you information concerning Title V (three pieces). One is taken from the national evaluation and is a case study of the California project. Second is a newsletter, sent out by our institution, on Title V. The third is a request for proposals sent out on our Title V Program for this coming year. We have found Title V to be an excellent vehicle in developing rural development research and extension programs. Here in California it has proven to be very valuable to us because it made it possible for us to attack problems in a different way than we have in the past. By requiring that funding be used for new and innovative programs, that it be a combination of research and extension activity, it has been a catalyst for us to involve a number of faculty members in what we feel is a very productive program.

I would encourage continuation of Title V, especially with additional funding. I realize that many states received such a small amount of funds that it was not conducive to them and difficult to put together relevant programs. Although our funding was small, we did have enough to use as seed monies for a number of activities. Full funding of this Act would allow us to carry out the mandate of the Act in that we could then involve institutions of higher education throughout the state in rural development research activities.

I hope your hearings are successful. Having been in rural development work for over 20 years now, I am convinced that the land grant system can carry out the purposes of rural development and extension. The same structure that has been successful in agricultural research and extension can be used to benefit the total rural areas. The biggest mistake we could make is to duplicate the extension system with other delivery mechanisms. If we are interested in financial efficiency and service to the local people we will adapt and use the system we have established rather than add new ones. There is no doubt that we can have an impact on helping to solve the problems in the rural areas.

Thank you for the opportunity to comment.

Sincerely,

L. CLAIR CHRISTENSEN,
Rural Development Specialist.

Enclosures.

A STATEMENT ON RURAL DEVELOPMENT RESEARCH NEEDS

(By L. Clair Christensen, Rural Development Specialist)

Prepared for consideration by the ECOP (Extension Committee on Planning) Subcommittee on Community Resource Development and Public Affairs.

STATEMENT ON RESEARCH NEEDS

The research base for scientific and techological content of teaching and demonstration is an unquestioned keystone in Cooperative Extension Service's agricultural and home economics programs. In the main, the research base is subject- or practice-oriented, ranging from theoretical through applied solutions for specific problems.

The research base for Extension programs in community development requires similar breadth. However, much of its orientation must relate to processes of complex human entities. The research base for community development has only in a small degree been established as firmly as that undergirding agricultural and home sciences.

This brief statement reviews research needed to strengthen Extension community development programs. It has two parts:

Types of research needed.

Brief reviews of main problem areas.

(A review of research needs identified in three regional rural development centers and several states is appended for further specification of research needs.)

TYPES OF RESEARCH NEEDED

Conceptual Research

This research discovers the nature of community structure and functions as a complex organization. It contributes to a needed model that will help Extension work more confidently and effectively as communities pursue their development goals.

Information Accumulation

This research draws together information relevant to community development in both macro and micro situations. Also needed is the synthesis of the growing body of knowledge to increase its accessibility and enhance its usefulness.

Problem Identification

This research probes through symptoms and surface phenomena to identify, factors that lie under current stresses. It requires the detached, analytical procedures of science, which may be difficult for involved persons to apply.

Problem Solving

While a sound body of theory and principles is essential in community development work, it is not the sole and sufficient base. Some capability in applied research is vital in order to deal with analysis of specific problems and examine feasibility of various alternatives on an individual community basis.

MAIN PROBLEM AREAS

Four areas encompass most of the expressed concerns of communities outside major metropolitan centers. Additions to knowledge in these areas will significantly strengthen Extension's program capability.

Community (Local Government)

A. Taxation and the financing of local government.
B. Governmental structure to adapt to changing conditions.
C. Effects of federal and state programs on local communities

1. Mandated programs (federal and state programs carried out by local communities—such as welfare, revenue sharing, Community Development Act, environmental quality, etc.)
2. Land use (regulations, policies and their present and potential impacts on the community)
3. Energy (policies, development, conservation and their present and potential impacts on the community).

Community Services and Facilities

A. What kind and level of services are needed, based on people's expectations?
B. Structures needed to provide basic facilities and services.
C. Economics of providing those services.

(Services include health, welfare, housing, transportation, water, sewer, recreational facilities, police and fire protection, and education.)

Economic Development

A. Assessing the extent, direction and qualitative aspects of urban-rural population movement, including effect on jobs.

B. Location and relocation of industrial activities in rural areas—socioeconomic effects.

C. Development of natural resources (recreation, energy, transportation, etc.)—potential effects on community structure and economy, including jobs.

Processes and Strategies

A. Research is needed to establish and validate a more complete theoretical framework or model of community resource development. Such a model would integrate research findings and generally improve research through better design and more effective communication among reseachers as well as with users of such research.

B. A synthesis of present knowledge is needed to establish the state of the art on the community as a social and economic system. Among specific areas of needed research are:

1. Economic interactions and their relationship to population change; changes in employment base, flows of investment, consumption, savings and taxation.
2. Identification of critical values of various ratios or flows as indicators of economic viability. (Are there ratios that indicate community well-being in the same sense that well-being of a firm may be indicated by its financial ratios?)
3. Social, political and economic linkages within and between communities, and the ways in which these linkages contribute to or reduce community viability. (For example, do home communities of elected officials have an advantage that assures that they will prosper?)

4. Ways in which community leadership capability interacts with institutional arrangements and the resource base in determining capability for constructive response to current or changing conditions.

5. Identification of problems and needs peculiar to certain sub-groups within the community; e.g., youth, the aged, minorities.

C. Analytical studies are needed into community decision making processes—determining operational decision criteria, how they are formed and used, how they can be changed over time: identifying generalizations that provide criteria to reduce macro-micro conflict; methods for aggregating individual preferences, goals and criteria into community preferences, goals and criteria.

APPENDIX

There have been activities in the four regions dealing with research needs and priorities. The following sampling sets out the needs situation as stated in the respective regions.

RESEARCH PRIORITIES IN THE NORTH CENTRAL REGION

1. Relevant Community for Rural Development Planning and Action

Work is needed to identify and build the rural community which will serve as the basis for tomorrow's institutions and services. What does it take on the part of the community to have an adequate base to offer institutions and services of high quality and at reasonable costs?

2. Structural Balance of Institutions and Services

Research is needed on the analysis of costs and benefits of various structural arrangements for elementary schools, high schools, administrative districts, community colleges, and vocational and technical schools. What are the alternatives for the rearrangement of local governments? How could they merge some of their functional and physical arrangements to prevent fragmentation and proliferation? An analysis of the transportation systems—including truck, rail, water and air is needed. Research in rural services such as rural health systems, regional rural shopping centers has not been done.

3. Human Resource Development or Quality of Life

Research is needed to determine what is meant by the "Quality of life". This is difficult to research and one of the methods might be to research the attitudes of people living in rural areas. Why do they stay there? Why do they leave? What are their expectations?

4. Determination of Economic Base Needed in Rural Areas

Research is needed regarding the possibility of attracting desirable export activity to inter rural areas in order to build the economic base. Information is needed indicating the kinds of things a community can do to encourage the location of employment. Little is known about advantages and disadvantages of dormitory towns or the future of retired farmer towns in rural areas.

RESEARCH IN THE NORTHEAST REGION

A task force report to the Northeastern Agricultural Research Planning Committee of September 1973 reviewed the area of research needs in rural development, setting out a framework of how this could be accomplished. In addition, an ad hoc committee developed a breakdown of priorities in community services research for the Northeast. This appears in a Northeastern Regional Center rural development publication, 1976. These two reports indicate priorities as follows.

High Priority: 1. Land use, 2. Community services, 3. Economic development.

Medium Priority: 1. Local government and finance, 2. Housing, 3. Processes & strategies for community development.

Low Priority: 1. Human resources, 2. Environmental quality.

1. Land Use

Concerns are the growing dispersal of urban population, location of industrial plants in rural areas, rising demand for recreation, country homes purchased by urbanites, preemption of land for public purposes, and the aesthetic and environmental qualities of land.

Local officials and people need to know economic and social effects, costs and benefits, who is affected by different land use patterns, how using land for agricultural or housing development will affect incomes dependent upon the tax base; also the cost and quantity of community services demanded by different land uses.

The consequences and effectiveness of different forms of control such as zoning, differential taxation, and the creation of land use districts; the question of preservation of agricultural lands in the Northest is a researchable land use problem.

2. Community Services

(The Subcommittee on Priority in Community Services developed the following list of research categories).

Highest Priority Rating: 1. Solid waste, 2. Public housing, 3. Preventative health care, 4. Long-term health care, 5. Elementary & secondary public education, 6. Social services for the aged, 7. Social services for children.

High Priority: 1. Sewage and drainage, 2. Land use control, 3. Public transportation for people, 4. Information and referral services, 5. Diagnostic and treatment services, 6. Social services for the handicapped.

Medium Priority: 1. Land transportation services (for both goods and people), 2. Planning, 3. Adult education, 4. Pre-school education, 5. Vocational training & retraining.

Community services has several aspects. One is that it is an economic activity raising questions about the size of operations required for efficiency, facilities and equipment that can be economically justified, planning for future expansion, economics to be achieved by consolidation.

3. Economic Development

In much of the area there is a desire to prevent further growth in population in order to maintain the rural atmosphere. At the same time there is a need for economic growth to provide employment. Basic information is needed about how growth processes operate, the key variables, relationship among them, and control points. Impacts on different kinds of growth on communities needs to be known if growth is to be controlled to achieve certain results and avoid others.

4. Local Government and Finance

The underlying reason for research in local government and finance is the frequent unsuitability of local governmental units established long ago to the needs of the present day. New political subdivisions, such as state multi-county planning and development districts, are coming into being. Research is needed to show the size and type of local government units needed for particular functions, costs imposed by adequate units and the means of adapting the old structure for current purposes. Research should be useful to identify the opportunities for managerial and financial functions as a basis for extension education. Research can show the revenue sharing capacity of alternative tax sources, the incidence of taxes, the effects of users fees, impacts of taxes on economic activity, and the relative advantages of financing activities through state and local revenue sources.

5. Housing

More data is needed to show the extent and kind of housing deficiencies, especially among the low income population. Research to improve rural housing should obtain information on housing needs, relative costs of improving old dwellings and construction of new ones, location of housing as it affects land, water, and sewage services, advantages and disadvantages of new designs, credit availability and subsidies needed for low income families.

6. Processes and Strategies

Many times communities fail in projects because they do not follow the proper process and use the right strategies. Research dealing with the selection of goals, the process of decision making, resolution of conflict and power of concensus, the initiation of action to reach goals, and the evaluation of means and achievements and the revision of strategies is needed.

RESEARCH IN THE SOUTHERN REGION

The Southern Region Rural Development Task Force Report of 1974 outlined the following needed research efforts.

1. Design and evaluation of alternative programs to assist low income rural residents;
2. Detailed description of resources controlled by rural residents;
3. Need to put more stress on considering people as a resource;
4. Needed knowledge concerning capital resources controlled and value of assets of rural residents;
5. Understanding of rural people's attitudes and aspirations toward education, training, employment, migration, etc.;
6. Availability and use of medical services, determination of additional services needed and improved methods of delivery;
7. Improved education: a. Measure quality of services provided, b. Determine accepted quality level, c. Determine efficient methods of providing accepted quality of education;
8. Rural water distribution and waste disposal systems (need to determine methods of construction in open county);
9. Need to develop economic development strategies: a. Measure of direct and indirect changes in the economy are needed to evaluate programs relating to human and natural resources, b. Need to know alternative actions to best use resources, c. Need to know critical amount and location of resources needed for effective development, d. Public financing (benefits and alternatives),
10. Methods of restructuring state and local government—or alterations of the functions of these governments;
11. Determine alternative ways of financing public services and ways for a more efficient use of tax dollars.

RESEARCH IN THE WESTERN REGION

In the Western Region there has not been a regional task force designated to approach the total problem of research in rural development (CRD). The following items are those established by individual states.

Oregon

1. Regional economic development (alternatives for and impacts for agricultural, resource, and industrial development in rural areas).
2. Human resource economics (impact of rural development on personal income, employment, labor, and population mobility).
3. Economics of public services (management problems associated with publicly provided goods and services in rural communities).
4. Institutions supporting rural development (behavior of institutions affecting rural development and behavior generated by institutions; economic impact of institutional alternatives).
5. Land use planning (that portion of land use economics related to development, planning, and the impact of land use decisions in the rural development process).

California

Private and Public Policy:

1. Impact of state and federal policy on local decision making;
2. Social-economic impact on public and private policy;
3. Community change (planned and unplanned);
4. Innovative approaches to community development (particular focus on ethnic groups and alternatives to economic-social acculturation).

Washington

1. Alternatives for raising public revenue (property tax incidence and its geographic distribution).
2. Economic efficiency and its effectiveness of alternative structures for local government.
3. Housing in rural areas.
4. Economic problems associated with seasonal farm labor.
5. Economic aspects of providing adequate food to needy groups in rural areas.
6. Economic analysis of local county and regional planning organizations.

Arizona

1. Ways of motivating people and becoming involved in the decision making process.
2. Effects of population mobility (gain or loss) on the community.
3. Alternative ways of financing local government.
4. Governmental structure (change) needed at the local level to meet changing conditions.
5. Transportation problems and their effects on rural areas.
6. Outdoor recreation (tourism) as a development enterprise in rural areas.

THE NATIONAL CENTER FOR APPROPRIATE TECHNOLOGY,
Butte, Mont., April 19, 1978.

Senator PATRICK J. LEAHY,
Committee on Agriculture, Nutrition, and Forestry,
Washington, D.C.

DEAR SENATOR LEAHY: Thank you for inviting me to provide input into the hearings of your sub-committee on Agriculture Research and General Legislation. I'm impressed by the topics your committee will be deliberating in regards to the status of rural development research within USDA and the land grant system and how they apply to the general welfare of rural people.

Some of the topics motivated me to undertake research while at the University of California, Davis. I was struck by the interests of a number of different publics—small farmers, cooperatives, farmworkers, urban agriculturalists, groups raising questions about more equitable and accountable ways of land and water use—were low or not even on the agenda as targets of concern for land grant college research.

The questions that motivated me and the resultant papers are included. You may use these as you wish. The questions and enclosures are the following:

Who are these publics? (alternative agriculture movement).

What are some of their concerns?—redirecting research priorities of the land grant system. Report of a 1973 Conference.

Can the land grant system respond or what are the factors that influence how research gets done? "Internal Factors", "External Factors".

What are some of the broader issues affecting rural people? "Sources of Rural Inequities".

I've also enclosed a Sourcebook on alternative agriculture produced by the Alternative Agriculture Resource Project in Davis. The purpose and the design on the back cover summarizes the issues and audiences that demand attention if meaningful rural developments are to take place. Also enclosed is an article on the guiding principles of appropriate technology which is also relevant to a more accountable approach to rural development.

Please feel free to call on me.

Sincerely,

ISAO FUJIMOTO,
Associate Coordinator, Research/Information.

Enclosure.

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SOURCES OF INEQUITIES IN RURAL AMERICA — IMPLICATIONS FOR RURAL COMMUNITY DEVELOPMENT AND RESEARCH

(By Isao Fujimoto and Martin Zone)

PREFACE

The purpose of this series is to provide small community officials with information on the latest community related research findings of University of California, Davis, researchers. The Community Development Research Series is funded by a special grant from the Regents of the University of California.

The series does not attempt to provide answers to every community's problems, rather, the attempt is to provide information leading to another view of the problems uniquely faced by small communities.

An earlier version of this paper was presented at the Rural Sociological Society Meetings in Montreal, August 1974. The paper was initially prepared while participating in Western Regional Research Project W-114, "Institutional Structures for Improving Rural Community Services", and, "The Social Implications of Research Project", at the University of California, Davis. The W-114 project is summarized in "Delivery of Rural Community Services: Some Implications and Problems." New Mexico State University, Agricultural Experiment Station Bulletin 635, July 1975. Support provided by Agricultural Experiment Station in both projects is duly acknowledged.

Researchers examining rural community problems have directed considerable attention to the inadequacies of rural services. Bad housing, poor education, insufficient jobs, lack of capital to start a business, and inadequate health care have been repeatedly identified as requiring attention. However, the improvement of rural services may not get at the cause of the problems, as problems can be manifestations of something more basic. As with all problems it is important to distinguish between the symptoms and the causes. For example, it has been fashionable to attribute problems of rural poverty to the lack of resources, education or incentive. Instead, our tax structure, assumptions about how rural development should take place, and the very policies and government subsidies instigated to aid rural development may be, in themselves, contributing causes. This distinction between symptoms and causes is the key to examining implications of various policies toward rural communities.

Observers have been pointing to the increasing concentration of land and corporate involvement in American agriculture,[1] linking this trend with negative consequences for rural communities. Despite numerous programs and policy statements concerning the preservation of family farms, development of rural communities, and decreasing the gap between rural and urban sectors, certain factors work to the detriment of rural communities.

The tax structure as contributor to rural problems

One of the factors behind inequities in rural areas is the tax structure. In the name of rural development, corporations are encouraged to settle in rural regions. Some states try to attract industry through tax and financial incentives, but, the investment subsidies can be taken without proportional benefit to the area's residents. Corporations can locate in a community without giving jobs to the local people, circumvent local laws on taxation and delay paying taxes. Of 4,000 new jobs created by one Chrysler plant in West Virginia, only 600 went to local workers. Of some 8,000 jobs created in Indian reservations by federal subsidies in past years, Indians got less than half of the jobs, which were mostly lower paying at that!

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[1] Faux, Geoffrey, "Reclaiming America," *Working Papers for a New Society* (Summer). 1973. The Cambridge Policies Study Institute.

In some counties it is better business for companies not to pay property taxes on time because accrued penalties on the delinquent tax are considerably less than profits realized by investing amounts which should have been paid on taxes. Another problem is the rampant underassessment of land. A 1967 study by the Pike County, Kentucky, School Board found forty to sixty percent of the county's land either unlisted or underassessed. The schools had a deficit of almost $113,000 and 45.3% of the people were below the poverty level. At the same time, $65 million worth of coal was hauled out of the county.[2] A Maine study showed that the state had been losing over one million dollars annually in property tax revenues because its timberlands were underassessed. In Texas, "a 1970 study of oil and gas properties by Texas University law students in Ector County, Texas, found that producing properties were undervalued by about 56%, and that non-producing property which Texaco had leased for $460,500 was not on the assessment rolls at all."[3]

When property taxes are collected, they fall hardest on the local homeowner. The percentage of family income spent on property taxes, by different income brackets, looks like this:

Family income:	*Percent of income spent on property taxes*
$2,000	16.6
4,000	7.7
6,000	5.5
10,000	4.2
15,000	3.7
25,000	2.9

This is because the property tax[4]—vital to rural areas for the provision of services—is a regressive tax. Unlike the income tax, the property tax is not graduated. Also, due to special interest group pressure, the property tax applies almost exclusively to real estate property. In the past, the tax applied equally to personal, tangible, and intangible property. Few states and localities tax intangibles such as stock, bonds, and notes. Thus, poor and lower income families whose property consists mainly of their homes (often mortgaged) pay tax on almost all of what they own. In contrast, wealthier people have holdings including many intangibles that are not taxed.

Assumptions about who rural development benefits[5]

Less obvious, but equally exploitative, are programs for rural expansion, recreation development, and second home take over. A visible result of expansion into the rural areas is the loss of agricultural land . . . this loss is related to our property tax system. As cities expand into rural areas, city residents are willing to pay high prices for residential plots. Consequently, land values jump. Agricultural land is taxed not on its current usage, but rather on its going market value. Thus, agricultural lands surrounding urban areas go up in value—not because of farming—but due to urban expansion. As land is sold, the market value and property tax of neighboring farms increase, making it more difficult for those on the land to remain.

Recreational and second home development schemes result in adverse effects for rural residents. The urbanite looking for outdoor recreation and weekend, vacation, summer or retirement homes may get what he wants. The developer gets his business and profits. The rural inhabitant, however, often gets higher prices and taxes . . . his say in local government is eroded or lost. Additional adverse environmental effects such as the lowering of the water table can jeopardize the agricultural base surrounding rural communities. Another effect is the cycle of waste associated with development schemes. "Sprawl" is recognized but other rural problems often are not; increased energy usage related to the increased distance from home to core work areas; increased pollution aggravated by increased private travel in the absence of mass transit; increased use of natural resources as building materials; and, increased takeover of agricultural lands on which to place these structures. Related to all this is the issue of land speculation encouraged by the capital gains tax. This system of taxation encourages a kind of reckless land use planning, since people buy land with an eye towards profit rather than as stewards of the land. Under this tax, assets held for a minimum time are taxable at half the rate of the individual's income bracket.

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[2] Nader, Ralph. "Land." *Community Economics* May, 1972. Center for Community Economic Development.

[3] Nader, Ralph. Ibid.

[4] *Just Economics.* "Property Taxes." October-November, 1973 :6–8.

[5] Hearing Before the Subcommittee on Monopoly of the Select Committee on Small Business United States Senate. 1973. 92nd Congress, 1st and 2nd Sessions on "The Role of Giant Corporations in the American and World Economies." Parts 3, 3A and 3B *Corporate Secrecy: Agribusiness.* Washington, D.C.: U.S. Government Printing Office.

Even attempts to rectify such inequities end up reinforcing the way the system is stacked against rural people. For example, the State of California passed the Land Conservation (Williamson) Act of 1965 in an attempt to curtail the loss of agricultural land to urban sprawl. In contrast to the property tax, the basis for appraisal of land under the Williamson Act is the use to which the land was being put, rather than on its current market value. This would reward those willing to commit their land to agricultural usage for a given period of time by providing tax relief.

However, a cancellation penalty, which can be waived if the action is considered to be for the public good, affects the Act's intent to equally benefit all farmers, small and large alike. The increase in land value, subject only to the capital gains tax, would more than offset the penalties. Despite compensatory provisions by the state, many rural counties have lost a great deal of revenue vital to the provision of many rural services—particularly taxes needed for quality education. While large absentee agricultural and timber concerns are not affected, local inhabitants and their school district are.

Agricultural subsidies: Perpetuating income inequities

One subsidy that makes agriculture attractive to non-farm interest is associated with the concept of "tax loss farming", which uses agriculture as a "tax shelter"; critics call this "farming the public treasury." This permits individuals, especially non-farmers, to harvest tax benefits. This is comprehensively detailed in *Sowing the Till: A Background Paper on Tax Loss Farming* by Jean Dangerfield.[6]

Non-farmers, such as doctors, lawyers, governors, and non-agricultural corporations go into farming because it pays, ironically, by enabling them to "lose money". For example, the Internal Revenue Service figures for 1965 show the following: Individuals with $1 million or more income—119 engaged in farming with 103 writing off farm losses; $500,000 to $1 million—202 in farming with 170 reporting farm losses; $100,000 to $500,000—3,914 in farming with 2,874 reporting farm losses; $50,000 to $100,000—12,398 in farming with 7,424 reporting farm losses; $20,000 to $50,000—69,132 in farming with 30,380 reporting farm losses; $15,000 to $20,000—66,003 in farming with 23,843 reporting farm losses.

The Government also had data on the 17,578 corporations reporting farming as their principal business in 1965. The figures showed these corporations had $4.3 billion in gross receipts in the most recent tax year—roughly 10 percent of total U.S. farm gross income. Yet, only 9,244 reported a profit for tax purposes. And, the taxable income involved totaled a mere $199 million.[7]

If so many are reporting losses, especially in such high income brackets, what makes agriculture such good business for non-farmers?

First, there's a bookkeeping advantage * * * farmers are allowed to use the "cash accounting" as opposed to the "accrual accounting" method. Originally designed to help small farmers with their bookkeeping, it is now being used by investor farmers to shelter their money. It works like this: individual taxpayers use cash accounting for filing tax returns, while corporations use the accrual method. In the accrual method, sales and expenses are effective when the merchandise changes hands; while in cash accounting, the transaction is completed when cash changes hands. Inventories are not required. Thus, a farmer buying feed in December can deduct the cost for that year, although it will not be delivered until the following year. Accrual accounting does not allow the deduction until delivery. The advantage of cash accounting is that it allows a deduction of expenses against high non-farm income. As Dangerfield points out:

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[6] Dangerfield, Jeanne. *Sowing the Till.* 1973. Washington, D.C.: Agribusiness Accountability Project.

[7] Report of the Select Committee on Small Business United States Senate. 1969. 91st Congress, 1st Session. Report No. 91–628. "Impact of Corporation Farming on Small Businesses." Washington, D.C.: U.S. Government Printing Office.

This lets him postpone paying taxes on that percentage of his income equivalent to the amount of his farm deduction. In effect, he gets an interest-free loan from the government. When the product is finally sold and profit realized, the public's interest-free "loan" to the investor can be extended if the investor chooses to reinvest his profits in another farm venture.

There are more advantages. The subsidy received due to the investor's tax loss is in proportion to his tax bracket. This means the average farmer paying 20% of income in taxes could save only $200 on a $1,000 feed bill, while an investor in the 50% bracket saves 500 dollars. Or, looking at it another way, the investor pays $500 for $1,000 of feed versus the $800 paid by the farmer. Also, the investor can reinvest profits on final sales in other tax shelters. The real farmer depends on profits from final sales for his livelihood and must pay taxes on them. The investor farmer does not really have to profit in farming. Thus, by losing, he still wins. The farmer doesn't have this advantage and yet is forced to compete against those individual and corporate interests which do.

"Capital gains" and accelerated depreciation also work to the unfair advantage of the investor. Under the Revenue Act of 1942, farm assets such as livestock, trees, and vineyards are subject to capital gains treatment, as are land sales. This means they are taxed at half the rate of the owner's income tax bracket. As with cash accounting, the higher the tax bracket, the bigger the gain. Non-farmers can invest for a period of time in a farm venture—and apply capital gains treatment as part of their total investments, insuring profit and possession which capitalize on capital gains, while the real farmers would have to sell their means of earning a livelihood in order to enjoy capital gains treatment.

The accelerated depreciation rule also permits investors to take advantage of programs intended for real farmers. The rule can be used to quickly depreciate real property and cattle bought to build up a herd . . . this amount is then deductible from taxable income.

Thus, current tax laws encourage the investors to seek tax shelters in vineyards and orchards, or in breeding herds, as they are reaching maturity. The cost of capital assets can be recovered through depreciation, while capital expenditures are fully deductible. Accelerated depreciation sweetens the operation, while investment credits and land improvement deductions aren't bad either. And, before production even begins, they can be sold off subject to capital gains. All the while, the investor uses the cash method of accounting rather than the accrual.

Additional subsidies that make farm land purchases so attractive include tax deductions allowed for soil and water conservation and land clearing. As land values do not seem to be going down, these deductions make land speculation and weekend homes even more attractive to the high bracket taxpayer. Limited partnerships, contractual arrangements with agencies specializing in farm management services, and personal investments are ways in which one can become an investment farmer. This kind of opportunity is generally not possible for residents trying to make a living as real farmers.

Investors farming for a tax loss offer unfair competition to farmers farming for their living. Large plantings for tax purposes increasingly put independent farmers out of business. As in the case of the broiler industry, corporate entry into agriculture has made previously independent producers mere sharecroppers for large companies such as Ralston Purina. Once independents are out of the picture, consumers will face the consequences of increased concentration of control in agricultural production, processing, and marketing: the rhetoric of lower prices will ring hollow when matched against the tyranny of prices being set at will by the selected few vertically integrated companies that will control each commodity.

Senator Gaylord Nelson, chairperson of the Senate Subcommittee on small business, expresses his concerns regarding the effects of concentrated control:

There is evidence that much of this country's corporation farming is a nearly invisible type operation aimed at control of farm commodities at the producer level and bypassing of traditional markets rather than direct operations of farms and ranches.

This is achieved through contracts with producers, plus some actual ownership and operation of feedlots and similar facilities. One common characteristic is that little or no corporation-owned land is involved.

But, assessing the impact of big money is extremely difficult as it is very hard to obtain accurate and complete data. Not all ventures must file with state or federal agencies. There is no information about acreages subject to this new type of "farming" . . . nor is there information on livestock managed by tax shelters.

Subsidies that favor large production units over small[8]

Similar to the effect of our tax policies, subsidies on resources such as water, grazing lands, crops and research tend, also, to be geared more to the best interests of corporations than to rural community concerns.

The availability of cheap water is critical for agriculture. However, the corporate thirst for water is obtained at considerable public expense. Boeing Aircraft, which owns 100,000 acres in eastern Oregon, has been using the public water of the Columbia River for irrigation purposes. Similar actions have been declared illegal. But, in California the federal government has not followed up on favorable rulings to prevent usage of federally financed irrigation project waters on lands which exceed the 160-acre limitation of the Reclamation Act of 1902.

To avoid the hassles and bad publicity, corporate interests have been able to secure legislation which legally allows them to have access to publicly financed water projects, which, in effect, subsidize their operations, such as through the California State Water Project. The east side of California's Central Valley receives irrigation water from the Bureau of Reclamation's Central Valley Project, whose waters are subject to the Reclamation Act of 1902, limiting delivery of water to any single landowner to 160 acres. Although the federal government was willing to extend the project to the west side, the landlords of the west side blocked and substituted it with the California State Water Project.

At the time the California Water Plan was placed on the 1960 ballot, west side landowners included:

Standard Oil of California, 218,000 acres;
Other oil companies, combined, 264,000 acres;
Kern County Land Company, 348,000 acres;
Southern Pacific Railroad, 200,000 acres;
Tejon Ranch Company, 348,000 acres;
Boston Ranch Company, 37,000 acres.

A 1959 study by the California Labor Federation reported that 33% of the land to be irrigated was owned by 11 landowners.[9] The biggest donors to the successful 1960 campaign for the project's bond issue were Southern Pacific and Tejon Ranch. A powerful supporter was the Los Angeles Times owned by the Times-Mirror Corporation which controls Tejon Ranch. The biggest bondholder is the Bank of America.[10]

Although the most optimistic estimate of the bare minimum cost of the project was $2.5 billion to insure the bond issue's passage, the cost was understated at $1.75 billion. The Ralph Nader Task Force Study, *Power and Land in California*, calculated the figure to closer to $10 billion. Project water will be delivered to the west side of the valley at the mere cost of transportation. This amounts to a 90% discount—a substantial subsidy from individual California taxpayers can be sold at values vastly increased due mainly to the presence of water made possible by the public. Furthermore, the capital gains tax can be applied to the land sold, which leaves more for the landowners and less for the public coffers.

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[8] Marine, Gene. "California Water Plan: The Most Expensive Faucet in the World," in *Eco-Catastrophe* by Editors of Ramparts. 1970. San Francisco: Canfield Press.

[9] Casalino, Larry. "This Land is Their Land." *Ramparts*. July 1972:31–36.

[10] In the state of California, the Bank of America "is responsible for over 40% of the loans available to farmers for crop production. During the decade of the 1960's Bank of America extended agricultural credit in excess of ten billion dollars to growers and two or three times that much to agricultural related industries. Durng that same decade, the number of California farms declined by half—from about 110,000 to 56,000" Agribusiness Accountability Project. "Backgroud Material relevant to the Nomination of Robert W. Long to be Asst. Secretary of Agriculture for Conservation, Forestry, Research and Education." 1972.

Corporations are also involved in acquiring water resources from federally funded water projects for expanding mining operations. The American Natural Gas Company, with 1.9 billion tons of coal reserves in North Dakota, plans to build 22 gassification plants for which it seeks to reserve 375,000 acres feed of the Missouri River. In January 1971, the Bureau of Reclamation approved contracts to supply water from Big Horn Lake for the operations of Gulf Mineral Resources, Peabody Coal, Panhandle Eastern Pipe Lines, Ayshire Coal, Shell Oil and Westmoreland Associates in Montana and Wyoming.[11]

Federal subsidies also apply to grazing lands. Grasslands in the National Forest and the Taylor grazing lands are leased out as low as one-tenth the cost of privately owned lands. Eleven percent of the permittees lease 75% of the Bureau of Land Management forage at a cost of 30¢ a month per acre, signifying again the concentration of beneficiaries.

Another widely known subsidy concerns crops. A basic idea behind the soil bank program for subsidizing crops is to take acreage out of production in order to prevent surpluses. The program, itself, is huge. Federal crop subsidy programs cost the taxpayers more than all federal, state, and local welfare programs combined. Intended to benefit small operators, the biggest share of these subsidies now go to large corporate bodies. For example, Tenneco received over a million dollars in crop subsidies in 1970 while J. G. Boswell received $5 million to grow, but not to grow cotton. Despite recent limits placed on subsidies, the formerly large beneficiaries continue to obtain huge subsidies through a system of leasing out their soil bank allotments.

With the increased emphasis on capital and technologically intensive approaches, advantages of subsidies accrue to those who already have positions of leverage. This can also be said of the government subsidy that exists in the form of agricultural research. *Hard Tomatoes, Hard Times*, completed in 1972 by the Agricultural Accountability Project under Jim Hightower, criticized the Land Grant System for failing to address questions that concern the quality of life of rural people in America. Hightower documented how the major portions of the $341 million allocated to 50 state Agriculture Experiment Stations in 1970 went to benefit those already in positions of advantage.[12] Furthermore, when industry contributes money, it is able to get greater mileage from these research dollars. By giving small donations for research, it secures research and facilities without the cost of full time permanent salaries, equipment purchase, and plant maintenance.

However, a claim is made that research is natural, value free, without intent to benefit one group over another, and that findings are available to all. This disregards the fact that not all farmers can afford to implement recommendations that come with the current research orientation for a capital and technologically intensive approach. Not every farmer can afford a $30,000 tomato harvest. This reveals a bias toward bigness and a policy choice implying that bigness, concentration of resources, vertical integration and increased use of energy intensive approaches is the preferred policy. Furthermore, very little attention is given to the consequences of such policy, especially for rural people and their communities.

However, this stress on bigness contradicts USDA's own research findings as reported in *Economics of Size in Farming* by J. Patrick Madden. The study in Economic Research Service's Agriculture Economic Report No. 107 addresses itself to the relationship between farm size and efficiency of production. The widely held opinion by USDA officials, agri-business officials and Agricultural Experiment Station administrators is that efficiency is consonant with size of operation. However, in case after case, Madden found that economies of scale could be achieved equally well on smaller acreages run as one and two man operations.[13]

The emphasis on capital and energy intensive approaches to agriculture and rural development poses many other important questions. What has been the social consequences of mechanization? What has happened to the labor scene? Where did the displaced go? Who got displaced? What has been the cost in social welfare? Agri-business and the land grant college researchers have heretofore claimed that such innovations save the consumer money, without adding that it is the same consumer who, through his tax dollars, must pick up the welfare cost for the very same workers displaced by technology developed without thought of the social consequences. Who benefits in the long run from this, and who pays the price? Have food prices come down as claimed? Curiously, food prices rarely go down. Cost of living index shows that while farm prices have decreased consumer prices have increased. Who is benefiting and what is the relationship between USDA/AES research and groups that have benefited most from the continuing rise in food prices? Conversely, what would happen if the researchers tackled issues raised by publics with alternative approaches to rural community development?

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[11] McDonald, Angus. "Who Gets the Water, Minerals and Timber?" Presented to the First National Conference on Land Reform, San Francisco. April 1973.

[12] Hightower, Jim. *Hard Tomatoes, Hard Times*. 1972. Washington, D.C.: Agribusiness Accountability Project.

[13] United States Department of Agriculture. *Agriculture and Economic Growth*. 1963. Economic Research Service, Agricultural Report No. 28.

Other publics and other questions

The previous discussion reviewed policies such as our tax structure, assumptions about rural development and advantages given to investors that detrimentally affect the competitive position of rural people. Also discussed, were subsidies intended to benefit rural people but which now benefit others more. All of this suggests that we need to re-examine many of the solutions suggested for rural development including assumptions behind established policies.

Also, the very institutions set up to examine those questions concerning the welfare of rural people have, themselves, been found askew. Either by default or misplaced emphasis, current efforts appear to aggravate rather than alleviate the situation for rural people. In a search for alternatives, a conference was held in June, 1973, at U.C. Davis on "Redirecting Research Priorities". This brought together representatives of groups, such as farm workers, organic farmers, consumer cooperatives, small farm organizations and scientists concerned about a more ecologically accountable approach to agriculture. A sampling of their suggestions and concerns are summarized here.[14]

Wendell Lundberg of the California National Farmers Organization observed: "Efficiency has been applied to the wrong thing—not to people oriented efficiency but money type efficiency—what can make the most dollars, not what is best for people." Others elaborated on this theme stressing the necessity of putting research that concerned improving not just efficiency, but the general quality of life as well. There was an underlying theme that the prime concern shared by all was not just with economic development but a concern to improve the quality of life with respectful consideration for environmental and human resources.

Jim Horgen, then research director of the United Farm Workers conveyed the general mood of those attending the conference through these words: " * * * we don't object to efficiency in agriculture. But we do reject irresponsible efficiency which gives no care for the lives of the farm workers, who, like the growers, make their living in agriculture. Research should be done to promote jobs—not eliminate employment. The public's money should be used to benefit the public."

Jerry Kresy, representing the Consumers Coop of Berkeley suggested valuable work could be done by the University on topics such as: techniques for small farming; urban gardening—how to grow food on city lots, what plants would grow best in urban areas, what tax and environmental benefits would accrue from city lot growing; developing tools that are not dependent on fossil fuels could be peddle powered using modern gearing systems and light metals; pilot programs on urban land use for farming in different types of cities, including the use of sludge for fertilizer, and waste water for irrigation.

He also suggested examination of consumer concerns about the influence of various food related bodies such as crop advisory boards and the retail and wholesale business on farmer receipts and consumer prices.

Various scientists in attendance voiced the validity of researching topics suited to a more ecological approach to agriculture. There was a call for research into alternative energy sources such as methane and energy conservation. Professor Robert Van den Bosch, of the Division of Biological Control at U. C. Berkeley, suggested, "We should begin building a backlog of techniques that do not require large energy inputs if the species is to survive. The government should support the research of organic gardeners instead of working solely on how to grow a more efficient rutabaga."

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[14] Fujimoto, Isao et al. "The People and the University: Summary of a Conference to Initiate the Redirection of Priorities for University Research." June 1973. Davis, California: University of California, Davis, Department of Applied Behavioral Sciences.

In addition to alternative production questions, marketing and food handling problems of small farmers were identified as important areas to understand. The President of the California Certified Organic Farmers observed that: "Everything has been oriented around such large quantities that the small grower can't process his own food and this is where it is at. If the grower can deliver his product prepared for the market, then, he will get his share of the wealth in return."

Also suggested, were examination of the impact of policies such as those discussed earlier in this paper: What is the social implication of land grant college research? What is the impact of corporations on the quality of life in rural areas? What is the impact of vertical integration on the consumer? How does the unfair competition farmers face from investors affect the consumer and the rural community?

The broader implications of research

The conference was held about the same time the National Academy of Science released the Pound report on the quality of agricultural research. The report called to task the limitations of the knowledge generated about the welfare of rural people. Scientists, whether physical, biological, or social, have not considered the consequences of the agricultural revolution nor challenged the assumptions about rural development mentioned earlier in this paper—nor have they realized the extent to which current policies (meant to solve rural problems) have actually aggravated the condition in certain instances.

There is more to understanding the rural scene than finding solutions to certain symptoms. Challenging questions emanate from the social consequences arising from the agricultural revolution and the structure of society, itself. The research process is, itself, part of the structure. In the case of research in the Land Grant System, the benefits have not only gone predominately to one type of public, but, more seriously affected other publics in a detrimental way. One reality that needs to be recognized is that research, itself, can be political in terms of whom it benefits. In their analysis of the work of the Agricultural Accountability project, Nolan and Gallagher suggest that researchers who do not critically examine the social institutions that sponsor and use their research findings are "in effect, advocating the position of the sponsors and users. If questions of advocacy are not raised, they are, in effect, answered; namely, that research should benefit those who pay the bills".[15]

To enlarge on examining the social implications of research, it would be well to ask: "To what extent is research done by the land grant system, which includes the University of California, contributing to, or creating, rural problems? To what extent and for whom is it a factor in promoting rural underdevelopment as well as development?

The causes of rural problems discussed here have not gone without notice. Various groups have formed public education campaigns, lobbying efforts and research and demonstration projects to deal with the inequities mentioned here.

Among the more active groups include the National Sharecroppers Fund which has organized farmer cooperatives in the South; Rural America Inc. organized to spotlight the issues of importance to rural America; the Agribusiness Accountability Project whose research writings have called attention to the short comings of the Land Grant College System, The Russian Wheat deal, Agri-business cooperatives and tax-loss farming. The problems of water subsidies and land reform have drawn the energies of Friends of the Earth and National Land for People.[16]

Several government agencies and key legislative committees command notice for their efforts on some of the issues mentioned here. In California these agencies include the Energy Resource Conservation and Development Commission, California Coastal Zone Conservation Commission, Air Resources Board,

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[15] Nolan, Michael F. and John F. Gallaher. "Rural Sociological Research and Social Policy: Hard Data, Hard Times," *Rural Sociology* Volume 38, Winter 1973:491–499.

[16] For description of publications and groups actively involved in alternative approaches to agriculture, see the sourcebook on *Farming* by the Alternative Agricultural Resources Project, June 1976. Davis Citizen Action Press.

Agricultural Labor Relations Board, the Office of Planning and Research, the newly formed Office of Appropriate Technology, and the Departments of Food, Agriculture, Housing and Community Development.

Summary

In this brief discussion, we have tried to point out the difference between symptoms of rural problems and the causes. Some of the problems we see may be manifestations of policies initially promulgated in the best interest of rural people, but, because of various loopholes, now ironically work against the best interest of rural people. We also suggest that things not be taken for granted, including the notion that all research has positive effects or is value neutral. Instead, there is need to attend to unforeseen consequences which merit more serious thinking—something we will need to do more of in the future.[17] Also, there is more to rural development than just economic considerations. Rural development and agriculture need to be ecologically and socially accountable as well.

Lastly, what comes home is the inter-relatedness of events and situations. The rural scene is very much affected by what is outside the rural area. Though there is some utility to the rural label, there is as much validity in working with the premise that we are all inhabitants of a global village where urban problems are linked to the rural, and the rural linked to the urban with international policy affecting the domestic rural and urban situations. By looking more seriously at the causes and consequences of the changes affecting rural America, we can move more intelligently to involve the resources of the University and people concerned with the constructive development of rural areas.

TUSKEGEE INSTITUTE,
Tuskegee Institute, Ala., April 21, 1978.

Mr. PATRICK J. LEAHY,
U.S. Senator, U.S. Senate, Committee on Agriculture, Nutrition and Forestry, Washington, D.C.

DEAR SENATOR LEAHY: I sincerely thank you for your April 5 letter about next May 4-5 hearings on the status of non-farm rural development research within the USDA and the State Land Grant Colleges and Universities. I felt glad and honored that you solicited my comments and suggestions on that important matter. Since you asked for any interested witness to testify or submit testimony during these hearings, I was going to volunteer myself if I did not have to travel to Africa. On May 4 and 5 I will be in West Africa in a special mission for AID—Tuskegee Institute.

I will not be able to come to Washington but I am pleased to submit the following comments:

1. The idea of rural development in the United States does not encompass the majority of poor people who happen to reside in the urban areas of our cities. Ironically, the poor of this country will not directly benefit from the rural development research findings, whether they concern farm or non-farm projects.

2. A great deal of research has been done in several facets of agricultural and animal productions which are directly linked to the rural development. Now emphasis must be made on "reaching out" to those rural individuals who still remain on their land (about 3% of our population) to improve their standard of living in every way, health, communication, etc. * * *

3. My real concern in making these comments is the content of non-farm, non-food fibre, rural development research I wish this concept had been more clearly defined in the outline you sent me. Nevertheless, may I refer to the first page of Hearings outline, No. G. If the research does not concern agriculture (farm, food and fiber) or animal production, an institution other than USDA must take care of.

If it is funded by USDA, a separate research agency must be solely devoted to that.

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[17] A pioneer effort in assessing the consequences of technological innovations in agriculture is reported in *Destalking the Wily Tomato* by William Friedland and Amy Barton, Dept. of Applied Behavioral Sciences, U.C. Dalvs, 1975.

4. Concerning the future research in rural development, the following areas can be given consideration: (1) Water resources, (2) Sanitation and health clinics, (3) Road and transportation, (4) Hospitals, (5) Contagious diseases, (6) Cooperatives, (7) Energy conservation.

I hope to receive more clarification on the concept of non-farm, non-food research in USDA. So, I will forward more precise suggestions to you.

Very truly yours,

SUCHET L. LOUIS, Ph. D.,
Assistant Professor of Nutrition.

PLEASUREVILLE, KY., *April 22, 1978.*

Hon. PATRICK J. LEAHY,
United States Senator,
252 Russell Senate Office Building,
Washington, D.C.

DEAR SENATOR LEAHY: Thank you for the letter of April 5, 1978, informing me of your subcommittee hearings on rural development research and soliciting my comments and suggestions. The work of the Agricultural Research and General Legislation Subcommittee is important and I am pleased to offer my ideas to your staff.

I am a farmer and a member of the Small Farmer Information Project, Box 206, Pleasureville, Ky., 40057. We are a group of working farmers working together to inform ourselves, other farmers, and the general public about issues and developments that affect the well-being of Kentucky's farmers and rural communities.

It is a mistake to identify non-farm rural development research as a separate concern apart from the current food and fiber research efforts in the USDA and the land-grant institutional system. This is either an admission that the present system is unworkable and must be circumvented or a failure to understand that rural development problems are in large part the outcome of agricultural policies that have been encouraged and justified by research which has externalized and ignored all but the narrowest measures of efficiency and gross farm sales.

Non-farm rural development research is a meaningless distinction that would have the effect of creating research opportunities and new information without any provision for implementing research findings into public policy or the process of decision-making at the regional or federal level. It seems unlikely that taxpayers would be willing to underwrite expanded research efforts without some assurances that the benefits might be expected to accrue to the people and institutions of rural America rather than those agencies and their employees who perform the research.

If, on the other hand, USDA is encouraged to pursue new objectives in rural development research without first confronting its own involvement in the creation of these problems, it is unlikely that these efforts will bear any fruit. Indeed, it appears that we would be guilty of reinforcing the inadequacy of previous research and development efforts by allowing researchers to derive a livelihood from studying the negative consequences of their earlier works.

Non-farm rural development implies the existence of another category such as agricultural development. And *rural development* suggests a distinction from urban development. These are false distinctions which blind us to the obvious causal connections between town and country problems, and between agricultural development and the deterioration of family stability, local institutions, and our natural resources.

Without denying the abundant productivity and per man efficiency of American agriculture, one still must acknowledge the private and public policies which fostered this success have also encouraged unemployment, overcrowded cities, dependence upon scarce non-renewable resources, deterioration of the farmer's relative economic condition, serious losses of top soil through erosion, degraded standards of water quality, and a less democratic social and economic order.

Failure to recognize these connections is due to the fact that most agricultural research is performed by narrowly trained specialists, usually economists, whose primary criteria for decision-making is *cost effectiveness.* This "bottom line" mentality excludes all determinations of value except for the concept of *net worth*. This measure, while necessary, is exclusively quantitative and relegates value considerations to the subjective domain. For instance, net worth does not measure the value of the farmer and his enterprise in terms of its impact on the environment, the neighborhood, community cohesiveness, income distribution, or citizenship responsibilities.

Excessive reliance on orthodox measures of value is the by-product of a self-perpetuating professional research elite that operates without a system of accountability or checks and balances. Much USDA and land grant research escapes the process of peer review and replication which are the keys to responsible scholarship. Research needs are prioritized and translated into funded projects without adequate participation and review by private university scholars, experts from a sufficiently broad range of academic disciplines, or experienced, knowledgeable citizens of rural America.

The dissemination of research conclusions is most often limited to in-house USDA publications with limited readerships and agricultural magazines which often depend upon commercial advertisers rather than paying subscribers for their financial support. (Five different agricultural publications are sent to me each month, free of charge, and full of answers to questions I have not asked and replete with solutions to problems that are not mine. In most cases the journals' advertisers are in the business of selling the solutions to the problems identified by the authors of the accompanying articles.)

It is important to understand that the USDA and Land Grant system is a vast professional network. Research monies are necessary to attract and employ graduate students and purchase expensive laboratory equipment. In turn, these students graduate, become teachers and/or researchers and require more funds with which to attract students and fully utilize their laboratory resources.

This phenomenon, in a relatively short period of time, has resulted in a sizeable interest group totally dependent on the taxpayer for its livelihood. These professional researchers presently request public funds utilizing a formula tied to gross agricultural sales as though it were their right to a guaranteed minimum wage. The work of these researchers has come to reflect their concerns, interests, and skills rather than the needs of any identifiable public constituency.

Surely, the most sensible way to solve this problem is to restrict funds until the quality of research is improved and research priorities adjusted to reflect the real needs of rural America. *Health*, of the land, of the people who tend it, and of the people who live off of its bounty, should become the goal of all agricultural research.

As a tobacco farmer I understand better than most the difficulty of attaining that goal. So it is with some sense of irony that I direct your attention to the case study which is attached to this letter. It is a preliminary report on the status of the current research project at the USDA to study the structure and viability of burley tobacco farming. Tobacco farming is the nation's last example of a regional, small farm, family based, labor intensive, commercially successful agricultural enterprise.

The case study is intended to illustrate and amplify the arguments made above and to suggest the need for greater public scrutiny of USDA research and its impact on the people and communities of rural America.

In closing may I recommend that you solicit the testimony of Mr. Wendell Berry, a farmer and writer from Port Royal, Kentucky. In his recent Sierra Club book, *The Unsettling of America: Culture and Agriculture*, Berry documents most eloquently the problems to which I have alluded. He would be a most informative and articulate witness.

Again, thank you for this opportunity to place my views before your staff.

Most sincerely,

THOMAS L. GRISSOM.

PLEASUREVILLE, KY.

In March, 1977, the Economic Research Service of the United States Department of Agriculture announced plans for a *Costs of Production Study for Burley Tobacco, 1976*. Though not apparent from its title, the study was also designed to collect information on the *structure* and *viability* of burley tobacco farming. The existence of this research goal distinguishes this study from conventional USDA commodity surveys.

Because this study is of such great significance to the small farms and rural communities of Kentucky that depend heavily on income from tobacco for their subsistence, the *Small Farmer Information Project* has followed these research efforts closely. This case study will document irregularities and improprieties that raise serious questions about the purposes and objectivity of the research, the use of confidential financial information provided by unsuspecting farmers, and the desirability of continued taxpayer support for this kind of research.

Four public documents provide the basis for the information contained in this report:

1. A letter from James M. Keepper, the Agricultural Statistician in Charge, Kentucky Crop and Livestock Reporting Service, USDA Statistical Reporting Service, dated March 14, 1977, which was mailed to all tobacco farmers whose operations were to be studied.

2. The *Burley Tobacco Survey, 1976 Costs and Characteristics*, which is the actual questionnaire used to collect the research information.

3. The *Interviewer's Manual* which explains the study and its purposes to those persons employed by the USDA to interview the farmers.

4. An article, "Costs of Producing Burley Tobacco, 1976", authored by Verner N. Grise, USDA economist, which appeared in the March, 1978, USDA publication, *Tobacco Situation*, pp. 37–42.

Reference to these documents will be designated by the use of the numbers 1–4, respectively, as indicated above.

In addition to establishing the costs of production for burley tobacco, the study was designed to collect information on the structure and viability of tobacco farming. (Document 3, pp. 1–2.) These additional data were to be used to make six determinations:

1. Current number and size of burley tobacco management units and the effect of this size distribution for mechanization of production.
2. The age and tenure of tobacco farmers as they effect changes in the price-support program and prospects for mechanization.
3. Returns to farm resources to measure the potential for alternative farm enterprises or off-farm employment.
4. The characteristics of operator and labor resources to evaluate adjustments that might be needed with changes in the tobacco program.
5. The importance of the tobacco enterprise to family income.
6. Identify those farmers who could expand production, by how much, and under what conditions.

All of these concerns reflect current agribusiness ideology which assumes that specialization and consolidation of production into capital intensive operations employing the most efficient technologies is the goal of all public agricultural policies. This research assumes that mechanization is desirable, that the disappearance of the small labor intensive farm is inevitable, and the only rightful concern of the USDA is that group of farmers who could expand production.

The self-interest in these biases is obvious from the concluding sentences on p. 2 of Document 3.

Although long a goal of agricultural scientists, improved burley tobacco production technology has been slow to come. Progress has been made but technical advances have not offset rising costs. Some technical breakthroughs are on the horizon but even when they are deemed practical and acceptable they may be too expensive to be feasible for many tobacco farmers.

We simply ask, Since this is a study of the viability of tobacco farming, why are not the goals of tobacco farmers being studied, rather than the goals of agricultural scientists? Do the spokesmen for agricultural science represent the public interest in agriculture?

The distortions of objectivity in these research goals is less important, however, than the fact that full knowledge of the purposes of the study was concealed from the farmers who consented to be interviewed.

The letter (Document 1) informing participating farmers of the study does not mention any purposes for the survey other than costs of production. The letter states that production practices and characteristics will be compared as to "size and type of farm". In fact, however, the study combines farms into "management units" (Document 3, p. 1) and the distinctiveness of discreet groupings of land and people becomes an ignored abstraction. This is consistent with the desire of USDA policymakers to remake the definition of a "farm" so that it conforms to their view of reality and lends itself to quantitative manipulation.

On the first page of the actual survey questionnaire (Document 2), the farmer is informed that his "cooperation is very important in order to estimate accurately the cost of producing burley tobacco". No mention is made of the other purposes of the study. The farmer is told that his participation is voluntary, not required by law, and that all information will be treated confidentially.

However, on pp. 6-7 of Document 2 the interviewer is trained in techniques for eliciting information from uncooperative farmers that are overtly manipulative and coercive.

On some questions a respondent may be reluctant to express his true feelings to a stranger. Saying "I don't know" is one way in which he can avoid revealing his true feelings. If you think this may be the case, you may want to "break out" of the interview momentarily and allow the respondent to talk about something he is more comfortable with. This may be done saying something such as: "By the way, did you hear the weather forecast today?" or "Say, do you know a good place to eat in * * *?" As soon as the respondent becomes more relaxed, return to the interview by repeating the question; and

The man who says he doesn't have time for the interview is often just trying to put the interviewer off. A few comments about his farm may gain his interest. * * * If, after sympathetically listening, you still meet with a refusal, thank the farmer for his time and leave. *In all* cases, refusals should be mailed to the State office with a thorough explanation.

We question such practices, especially when the farmer is not fully informed of the uses to be made of such information. More importantly, we ask, should any farmer be cajoled by the federal government to divulge personal and financial information that is clearly proprietary and would be so treated by any agribusiness corporation?

Interestingly enough, the last question on the survey inquires of the farmer if he wishes to receive the survey results (Document 2 p. 18). The interviewer is told this question is a "public relations tool", (Document 3 p. 47), conveying once again the official perception of farmers as innocent and gullible.

The data collected from farmers were translated into computer language and reproduced in tabular form. A preliminary report on costs of production has been released. (Document 4) All of the characteristic information collected on farm labor, the operator and his family, and farm resources is emitted from this initial report. Those data will be used for further, more complex, studies projecting the anticipated rates of mechanization, labor and resource allocation, supply, demand, and price curves for tobacco, and the effects of alternative government tobacco programs. They will generate numerous research efforts by land-grant institutions within the burley tobacco belt to analyze and reanalyze the same data so as to answer simplistic questions and skim off more public monies for research that is costly and essentially duplicative.

In 1972 the USRA initiated a similar study on flue-cured tobacco production. The result has been six years of studies that have kept agricultural researchers well employed, an acceleration in the rate of mechanization, displacement of labor, costly resource adjustments, and not one single public policy to ameliorate the consequences for the people and land of the flue-cured production areas. Is there any reason to pay for another binge of research when the benefits to the public are so obscure?

The conclusions reported in the initial costs of production report are slanted to give emphasis to high labor costs without sufficient differentiation between categories of labor. The conclusions also emphasize economies of scale (spreading tractor and machinery costs over large acreages and fuller utilization of barn space) in achieving cost effectiveness without acknowledging that most labor costs in tobacco farming are treated as income to family labor on the other side of the ledger.

There appears to be a determined effort to interpret the data favorably for Area 1, the inner Bluegrass region, comprised of Bourbon, Clark, Fayette, Jessamine, Mercer, Scott, and Woodford counties. The data seem to indicate, however, due to higher land costs and a much greater dependence on hired labor, tobacco production is less profitable in Area 1 than in those areas where land values are lower and production is reliant on family and exchange labor.

But this study is not about *profitable* tobacco production. Instead, the researchers tabulate the *Costs* of production and then interpret them in such a way that labor is cast as the culprit in the problem of rising production costs. The real problem which confronts the researchers is that Area 1 is the site of the largest tobacco "farms" (Document 4 p. 39), and orthodox agricultural economics contends that large units of production are more efficient than small ones. This widely accepted principle appears to be contradicted by the data and yet no mention is made of the competitive advantage gained by smaller farmers utilizing family and exchange labor. Lastly, no figures on the value of production are given which might indicate that the quality of tobacco production, as reflected in the price per pound, is often higher on smaller, family based, units of production.

Is the United States Department of Agriculture not capable of drawing conclusions supportive of the small farm and the *labor* of the farmer and his family even when they look at their own statistics?

We believe that the *Burley Tobacco Survey, 1976 Costs and Characteristics* is a costly, ill-conceived USDA research project that is biased and discriminatory toward small farmers. We recommend that work on the project be suspended until a public accounting be given for the work completed to this date.

THE UNIVERSITY OF VERMONT.
Burlington, Vt., April 24, 1978.

Hon. PATRICK J. LEAHY,
United States Senator,
232 Russell Senate Office Building,
Washington, D.C.

DEAR SENATOR LEAHY: This letter is in response to your letter of April 5 relating to the scheduled hearings on rural development research. Since your letter was also sent to Profesors Malcolm Bevins and Neil Pelsue, Jr., of this department, we are collaborating on a departmental response. We cannot possibly address all of the questions raised in the hearing outline, since many of them require answers from research administrators at a national, regional, or state level. Instead, we will attempt to give some perspectives on rural development research and extension activities from a small, northeastern department that has an active program in this area.

Although precise and universally agreed upon definitions of rural development may be lacking, we believe that there is general consensus on significant components of the area. We would argue that the one broad goal of rural development is to improve the quality of life for rural people. In the northeast, three out of every 10 people are "rural" residents; in Vermont this classification would include virtually all of the state. Because quality of life is a subjective, value-laden concept, definitions of quality of life may be as numerous as the number of people trying to define it. But there may be more consensus as to what variables affect quality of life. Quality of life relates to the wants and needs, hopes and aspirations of people. It relates to the creation of job opportunities in rural areas, to the improvement of the quantity, quality, and access to community services, and to an improved social and physical environment. While the ultimate research goal is improving the quality of life for *people*, the research effort often may be devoted to the *physical* resources, e.g., housing, land use, transportation, etc.

The Northeast Regional Center for Rural Development in a 1973 report, listed a set of criteria for differentiating between rural development and other research (Exhibit I, attached to this letter). We do not know if this is currently being used by CSRS, but it seems to us to be a logical system for differentiation between rural development and nonrural development research.

There have been several research planning committees to establish rural development research priorities in the Northeast. These have been organized under the aegis of the Northeast Regional Rural Development Center at Cornell and a list would be available from Dr. Lee Day, Director of the Center. It is our impression that the northeastern region has been one of the most active in terms of rural development research, particularly insofar as regional research efforts are concerned. Copies of regional publications would also be available through the Center.

If our count is correct, the Vermont Agricultural Experiment Station listed 71 active projects in its 1977 annual report (VERMONT SCIENCE, Vol. 2, No. 1; Winter-Spring 1978). Of course, nine are classified as rural development projects, and seven of the nine are in the Department of Agricultural and Resource Economics. The department had a total of 12 active research projects, of which the above 7 were in rural development, so we are devoting over half of our resources, both in terms of budget and personnel to this area. A new regional project in which we are participating relates to migration patterns and population redistribution in the Northeast and is not included in this count.

There are additional problem areas in which we could and would like to expand our research activities. However, it would be impossible to do so without additional funding and personnel.

Research in rural development has generally fallen into one of three broad categories. The first of these is "state of the arts" research which involves analysis of past studies with either a theoretical or an applied orientation and relating these to current rural problems. The second category relates to analytical research designed to determine the relevant variables in the development process and to gain a better understanding of the nature of rural development. The third type involves either theoretical or applied studies of basic policy issues, with the goal of providing a more firm basis on which policy decisions can be made. It is important to emphasize that research in rural development involves a complex set of economic, sociological, political, and value-laden issues and expectations of immediate payoff may be overemphasized. This may have been one of the problems when the Congress first funded rural development research several years ago, with the premise that results would be evaluated in 2 years.

To give you a little idea of this department's research efforts in rural development, a few of our projects are discussed below.

Hatch 245, "Analysis of Economic and Environmental Change in Ski Area Communities," was a rural development project. One of the principal reasons for undertaking this research was to provide data to rural leaders, town government, and rural planners so as to better assess the social, economic, and environmental impact associated with ski area development. VPIRG (Vermont Public Interest Group Incorporated) recommended in 1972 that "the state initiate and finance a series of studies on the economic and environmental impact of the ski industry and land development on rural towns."

One of the principal areas of investigation was comparison of tax burden on year-round residents in ski area communities with tax burden on year-round residents in other communities. We found a very high degree of correlation between recreational development and low residential property tax burden. This was, in essence, a study of an important social problem.

H 277 (NE-100), "Recreation Marketing Adjustments in the Northeast," is also a rural development project. The second objective is a rural development objective: "to evaluate and measure the impact of recreation marketing adjustments on regional economies." People living in the Northeast Kingdom (an economically depressed area) are vitally concerned with their role in the recreation and tourism industry. If our research indicates a shift from congested recreation areas like Cape Cod to a less crowded natural environment like the Northeast Kingdom, the rural development implications are readily apparent. Recreation and tourism means jobs and opens up income-producing opportunities for other businesses such as small craftsmen, fruit and vegetable stands, and other types of small businesses. Most communities in the Northeast Kingdom are not well suited for either industrial or commercial growth. If residents are going to be able to stay in these communities there must be jobs of some description. Recreation and tourism is a viable alternative for this economically depressed area. We, as educators, cannot give useful guidance to businesses, or community leaders in an area like the Northeast Kingdom without learning the facts associated with changing recreation consumer habits. Armed with facts, we can guide them into a rural development pattern that will benefit all segments of society.

H 220 (NE-77), "Community Services for Nonmetropolitan People in the Northeast," was a major study involving 11 of the 12 northeastern states. The research was designed to provide data on the quantity, quality, adequacy, and access to a wide range of public and private community services. Agricultural economists, rural sociologists, and home economists were involved in this project and, in addition to many state reports, regional reports were published on housing, health, problems of the elderly, and education.

Under H 250 (NE-89), "Community Structure and Quality of Life," the Vermont effort has been focused on developing a computerized community data bank. Fred Schmidt has developed this system and is accumulating an immense data base on every community in the state. We are getting numerous requests for data of this sort from regional planning commissions, towns, private organizations, and individuals; and there is an immediate payoff from this effort. Our problem here is to find the financial resources to continue the data bank now that the developmental phases are completed.

We are or have been actively engaged in research relating to land use as it involves preservation of agricultural and forest land, tax policies, and land use planning. Here we can see payoffs indirectly through passage of legislation.

What we have tried to do in this letter is show that there is ongoing research in rural development that promises eventual payoffs.

Finally, we would like to comment briefly on certain of the questions raised in the hearings outline from a Vermont perspective. We see no evidence of "domination" by agricultural and food and fiber concerns. In our experience, good research proposals will be funded, given the constraints of available research funds. Obviously, we could use additional resources, but we recognize that there are legitimate production agriculture priorities as well.

We have seen no evidence of "suppression" of legitimate research proposals in rural development in the Northeast. With limited resources, poorly developed or lower priority research proposals cannot, and should not, be financed.

We can see no compelling reason to establish a new bureaucracy within the USDA specifically to promote research or extension in rural development. Within what was formerly ERS, there are several divisions whose responsibility is in this area, and we have found these divisions to be responsive. Furthermore, this could lead to duplication of effort since there is a fair amount of complementarity between research related to the farm-food-fiber sectors and the nonfarm sectors.

In Vermont, we believe that the Extension Service is committing a significant share of its efforts to the problems of nonfarm people and such work is expanding.

We hope that these comments will be useful background as you prepare for the May hearings and would appreciate receiving any published reports of the hearings.

Sincerely,

ROBERT O. SINCLAIR,
Chairman.
MALCOLM I. BEVINS,
Assoc. Resource Economist.
NEIL H. PELSUE, Jr.,
Assoc. Agr'l. Economist.

APPENDIX I

EXHIBIT I.—CSRS CRITERIA FOR DIFFERENTIATING BETWEEN RURAL DEVELOPMENT AND OTHER RESEARCH STUDIES

Criteria	Rural development research	Other station research
Focus	Primarily people and community	Primarily technological products and processes.
Decisions influenced	Primarily public and group	Primarily private and individual.
Scope	Total rural socioeconomic setting	Primarily agricultural production and marketing.
Clientele groups affected	Primarily rural nonfarmers Small and part-time farmers. Rural government and planning groups. Agricultural workers—hired and migratory. Community organizations and institutions. Low income and poverty groups. Elderly and retired people. Producers and users of community services. Producers and consumers of natural resource products and services—both rural and urban.	Primarily farmers. Managers of agribusiness firms. All consumers of farm products—rural and urban.
Types of potential benefits	Improved economic opportunities Improved social and cultural environment. Improved physical environment. Improved human capabilities.	Production and marketing efficiency and improved industry income. Greater production capacity. Better quality diets at lower relative food expenditures.
Primary processes influenced	Developmental and organizational—new activities and improvement of existing systems—economic, social and environmental.	Continued economic growth of established competitive industries.
Relationship to established research programs.	Expands research under long-range study goals VIII and IX—currently less than 8 pct of total station research expenditures.	Continues research under long-range study goals 1 through VII—currently more than 92 pct of total station research expenditures.

Source: "Supplement to Task Force Report on Rural Development Research in the Northeast for the Next Five Years—A Framework"; Northeast Regional Center for Rural Development, Cornell University; Aug. 1973.

ALABAMA AGRICULTURAL AND MECHANICAL UNIVERSITY,
Normal, Ala., April 25, 1978.

Hon. PATRICK J. LEAHY,
United States Senator,
232 Russell Senate Office Building,
Washington, D.C.

DEAR SENATOR LEAHY: Thank you for your letter of April 5, 1978 regarding your subcommittee hearings on the status of non-farm rural development research.

In our Department's work with rural Alabama communities in planning for an integrated approach to job creation, job training and job placement, the agricultural potential for the area plays a big part. The research strategy which we think needs support nationwide, and one which we are trying to implement on a small scale with our limited resources, is the direct involvement of local communities in the research process—from design to analysis, to dissemination and utilization of research results. The partnership between the university and the local community benefits both. Many community leaders are graduates of our institutions and are pleased to develop more explicit community linkage. Their image of the university as a community resource is enhanced as they incorporate new community development skills into local governments. Dr. Edward Moe of USDA/SEA is very well versed in the demonstrated advantage of involving local communities (and users of the research) in the research process.

It is my experience that this style of research falls between extension and research as perceived by many authorities and receives little support from either. In fact, development of new research constituents (community) may be perceived as a major threat to the already diminished funding sources of traditional styles of agricultural research and extension. Thus, research of this nature is not likely to receive support without separate authorization and funding such as through the Rural Development Act. Luther Tweeten and George Brinkman in "Micropolitan Development" make this point well.

All of these "non-agricultural rural development" concerns invariably relate back to, if not enhance the cause for agriculture or human nutrition research and extension education. I feel applied agriculture research, with its storehouse of knowledge and new but underutilized technology, can only profit from closer communication between universities and local communities.

One unfortunate means of implementing rural development subscribed to by some at local levels is the reduction of rural poverty through encouraging outmigration of the poor. This attitude may have perverse effects upon health of rural poor which only compounds the poverty problem. Our research on rural health, implementation of school lunch and breakfast programs, and infant mortality, still suggests that the poor in rural areas need continued leverage from federal legislation. For example, I am including one research paper where we interpret the admittedly limited findings to suggest that there are perverse local social structural influences upon free-lunch participation in many local school districts.

In summary, I feel it is a mistake to treat the non-agricultural aspects of rural development research as being unimportant to agriculture.

I look forward to the results of your hearings.

Sincerely yours,

GERALD C. WHEELOCK,
Associate Professor.

Enclosure.

COMMUNITY SOCIAL STRUCTURE AND SCHOOL FREE-LUNCH PARTICIPATION[1]

(By Gerald C. Wheelock[2] and Ann Preyer Warren,[2] Alabama A & M University, Huntsville, Ala.)

ABSTRACT

Proposed "block grants" to states to provide school free-lunch to the truly needy, leaving programming for the near needy to the local level, reopen questions of equality. Perspective as to how state and local communities would deal with these questions is gained by regressing school free-lunch participation rates for 1972, 1973, and 1974 on three dimensions of social-structure. The controlled regressions are consistent with the hypotheses that free-lunch participation rates are influenced by local social structure.

These results suggest that "block grants" are less likely to provide equal access to free-lunch programs than is the present federal program. Indicated, in the interest of increased equality, is the importance of continued progress toward universal school feeding programs.

INTRODUCTION

Administration proposals to provide "block grants" to the states to design and implement their own child nutrition programs have been receiving increasing attention by Congressional Subcommittees. While the most recent proposal was rejected by Congress, it is likely to appear again in a more detailed form. The proposal's two major points dealt with "trying to increase the assistance available to those who are truly needy, and also trying to reduce Federal costs" (*1*). The executive branch's wish to limit Federal support of the program to the "truly needy" raised several questions. How many near-needy children would be priced out of the school-feeding programs? What are the priorities of state and local systems that would be left with the choice of either picking up the tab for the continued participation of the near needy or increasing the price of lunch 25 percent? Are the near needy influential in setting the priorities of state and local systems? Even if a program for the near needy is given a high priority, are the necessary resources available to the local states and school districts with the largest proportions of near needy?

While this study will not provide conclusive answers to these questions, it provides a conceptual and empirical starting point from which hypotheses and suggested answers are derived.

Factors and outcomes related to participation rates in the school lunch program generally have been summarized by Garrett and Vaden (*2*). Studies relating to participation rates in the free-lunch program are much less apparent (*3*). While it is naive to expect that Congress would wait for development of a relevant comparative research grant, the existence of such research could weigh heavily upon "block grant" legislation.

The first thesis of this paper is that at least as of 1974 there was still considerable "under participation" in the free-lunch and breakfast program, thus the potential to reduce Federal costs through "block grants" is minimal. A second thesis is that in addition to "under participation" there is also significant inter-district variation in participation rates among those who are eligible for free school nutrition programs. If so, in spite of federal guidelines, this would suggest that discretion is already exercised at local levels, and that additional encouragement from "block-grant" legislation is not needed. Logically, it would appear that "block-grants," which both reduce federal inputs and increase the local level discretion as to how funds are to be expended, are almost certain to eliminate free lunches for many near-needy children.

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[1] An earlier draft of this paper was presented to the Rural Sociology Section of the Association of Southern Agricultural Scientists in Mobile, February 1976; The Annual Community Development Conference, AAMU, May 1976; and the Conference on Regional Information Systems, Technology and Development Institute of the East West Center in Honolulu, July, 1976. The authors are indebted to participants of these sessions and to two anonymous referees for their suggestions. The data set was developed in cooperation with T. G. Smith, School Foodservice Coordinator, State Department of Education in Montgomery. Carol Wheelock, a registered dietitian and a county food service supervisor, provided valuable insights. Prisca Mugwira and Cora Edwards, AAMU, provided technical support for the project. The research was supported by a NSF Research Initiation Grant and USDA/CSRS Grant 316-15-17.

[2] Gerald C. Wheelock is an associate professor of rural sociology in the Department of Agribusiness Education at Alabama A. & M. University (AAMU). His Ph. D. was earned from Cornell University and M.S. at Iowa State University. Ann Preyer Warren, a registered dietitian, is an assistant professor of foods and nutrition at AAMU in the Department of Home Economics. She received her B.S. from Tuskegee Institute and the M.S. from Case Western Reserve. Presently she is on Ph. D. study leave at the University of Tennessee, Knoxville.

On the other hand those advocating universal school feeding (*4*), i.e., government financed meals for all school children, may find that this and subsequent studies could be used to support their proposal. At the very least, this study should highlight some of the issue areas in which states would have to focus attention and planning if more local discretion is to find its way into Federal legislation.

METHODS AND PROCEDURES

Study population

While a statewide sample of school districts would permit inference to the state of Alabama, this study only describes the situation in thirteen counties of three regional councils of governments in north Alabama. There are 15 city systems and 13 county systems in the region studied. In most of the analysis that follows, the systems are treated as 28 unique school districts with their own superintendents, school boards, and including social structure, their own decision-making environments. However, as organization of this area into a single health-planning region is in progress, an aggregate description of the student population is presented.

In this region, as of the 1970 census, there were 182,000 youth of school age (*6–17*). Of this total, 21.9 percent were in families below the poverty line and 29.6 percent below 125 percent of the poverty lines (*5*). Approximately 50,000 youth qualify for 174 free lunches and breakfasts each year. At Federal reimbursement rates of 77.75 cents and 34 cents, respectively, the total potential contribution of the program means nearly 10 million dollars to the region's schools and economy to say nothing of the health of its youth. This figure is exclusive of additional benefits received for each reduced price or paid meal served (*6*).

Obviously, there are some significant economic advantages to full implementation of this program in each district. To think that the program falls several million dollars short of its potential for the region is reason enough for this study.

SCHOOL-FEEDING PROGRAM PARTICIPATION

Participation rates were computed for the free lunch, total lunch (free and paid) free breakfast, and total breakfast (free and paid) programs by dividing the year's total school attendance for each school district into the year's total number of meals served in each category.

As reported in Table 1, participation in the total lunch program averaged nearly 80 percent in 1972 and it fell to less than 76 percent in 1974. This decline represents 2000 students dropping out of the program or a loss of more than one-third of a million lunches for the region. Considering the above discussed "under participation" in the free-lunch program many of these 2000 would apparently qualify for free lunches as near needy or needy students. Either they have not applied due to social stigma or their free-lunch applications have been refused. Observation that the standard errors are increasing even while the average district total lunch program participation rate is declining (Table 1) suggests an increasing unevenness in program delivery. A 22 percent increase in school lunch prices over this two year interval is a major cause of these disruptions.[1] In line with increasing lunch costs, the average school districts free-lunch participation increased from 19 percent in 1972 to nearly 23 percent in 1974. In sum, while approximately 2000 youth were dropping out of the total lunch program, another 2000 youth region wide did opt to change from paid-lunch to a free-lunch status.

Participation rates in the breakfast program are very low, but they follow patterns similar to the lunch program during the three-year period. No more than half of the 28 schools conducted a breakfast program during the three years. In fact, the number of programs declined from 14 in 1972 to 12 in 1974.

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[1] "Local school income" (paid lunch receipts as opposed to USDA reimbursements to the 28 school districts) increased 12 percent from $6,490,385 in 1972 to $7,268,215 in 1974 (7). Adjusted for declining school attendance of 2.25 percent, 29.1 million to 28.4 million in 28 schools (7), and a net decline of over eight percent in the paid lunch program participation rates (Table 1) the increase in the price of paid lunches was about 22 percent.

The dependent variable in the multivariate and covariance analysis which follows is the free-lunch participation rate (FL) for 1972, 1973, and 1974.

Covariates[2] of Free-Lunch Participation

All schools which participate in the National School Lunch Program must make free lunches available to students of families below the poverty line. In addition, as Alabama has done, states are free to set the standard as high as 25 percent above the poverty line. This means, in the 1975–76 school year, for example, children from families that comprise a hypothetical four-member household and have incomes below $6,260 a year were eligible for free meals at school (*6*). Families not meeting these criteria but with other unusual expenses due to high medical costs, shelter costs in excess of 30 percent of income, special-education expenses due to mental or physical conditions of a child, and disaster or casualty losses may apply. These allowances mean that more than the total number of children in families below 125 percent of the poverty line may qualify at any one school at any time.

A measure of the percent of school-age children who qualify for free-lunch and breakfast in any one school district of Alabama is available in the 1970 Census of Population and Housing.[3] This measure, hereafter referred to as the poverty rate (PR), is the percent of related children below 18 years of age in families below 125 percent of the poverty lines. Assuming, as has been done by HEW for allocating poverty related federal funds to education, that PR holds constant across all ages 0–18, and that the proportion below the annually adjusted poverty line holds constant from 1959 through 1974, PR provides an acceptable standard for comparison with free-lunch participation rates.[4] An additional assumption is required. It is that the proportion not attending public schools is constant across school districts. This is not the case with three districts (Madison county, Huntsville city, and Scottsboro city) which report five to eight percent in private schools. While these students are probably all in families above the poverty line, the poverty data are not adjusted. Therefore, the percent of students below the poverty line in the public schools mentioned is somewhat higher than the census data indicate. Furthermore, it should be noted that the census data are based on 20 percent samples of all households (district populations range from 4000 to 140,000 with a median population of 16,000) and are subject to a small margin of random error due to sampling. All of these errors will reduce the chances of achieving the hypothesized results.

On the average, these 28 systems have 30.5 percent (compared to 29.6 percent for the region as an aggregate) of their youth in families below 125 percent of poverty (Table 3). The standard deviation for the poverty variable (7.60) is similar to those computed for free-lunch participation (Table 1) but the average free-lunch participation rate lags 7 to 11 percent below the 125 percent of poverty criteria employed in Alabama. Full implementation of the free-lunch program would mean on the average more than a 30 percent increase over the number of free lunches served per school in 1974. Thus, variables other than PR must account for participation.

The official poverty guidelines are based on family size, i.e., larger families defined to be in poverty may earn more than smaller non-poor families; thus, the poverty rate should account for family size. However, the cost of three or four lunches is dramatically more than the cost of one lunch. While poverty families may scrape together enough money for one child's lunch and remain self-reliant, larger poverty families may be much more likely to acknowledge their official poverty status. Therefore, a second covariate of the dependent variable, the average number of children per family (FS), is included.

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[2] While a fixed-model analysis of covariance is not employed, the term covariate is used advisedly here. Cohen (*8*:438) points out that a covariate is "nothing but an independent variable which, because of the logic dictated by the substantive issues of the research, assumes priority among the set of independent variables as a basis for accounting for Y variance."

[3] In Alabama, school districts, counties and cities have coterminous boundaries. The standard Fourth Count Housing and Population Summary Tapes were used as the data source (*9*). Exact data descriptor numbers are provided in footnotes to Table 2 (*10, 11*). For states with school district boundaries differing from census geography, a subset of the data on the Fourth Count Summary Tapes has been prepared (*12*). However, only the poverty data and family size data used in this study are included.

[4] In the aggregate for the 13 counties, per capita incomes increased 39 percent between 1970 and 1974 compared with 44 percent for Alabama and 38 percent in the United States (*13*). During one recession year alone (1974), the Bureau of the Census (*14*) reports a 5.6 percent increase from 23.0 to 24.3 million persons in the number below the poverty line.

Finally, the participation rate in the total-lunch program (TL) is included as a covariate. A program widely utilized by rich and poor is less likely to have a poverty program stigma; therefore, fewer would refrain from free-lunch participation on the basis of pride.

Class-structure Variables

In Piven and Cloward's "Regulating the Poor" (*15*), power is conceptualized as being concentrated in the hands of the elite, who, either directly or indirectly through moralistic indoctrination of the middle class, organize sufficient pressure upon welfare program administrators to regulate benefits, forcing the poor to work. Muraskin (*15*), in review of "Regulating the Poor," points out that the moralistic, self-reliant, work-ethic position of the middle class may be an independent variable in its own right and not necessarily subject to conditioning by elite power. In either case, as an independent or as an intervening variable, the moralistic, self-reliant concept should be included in an analysis of variation in welfare-program participation.

In the context of the free school lunch program, superintendents and local principals are responsible for administration of the free nutrition programs. In addition to their students, they are accountable to their local school boards, school trustees and indirectly to the influential public for their philosophies as to whether welfare and nutrition programs should be a part of the education package.

While philosophies of school administrators may contrast sharply with local power elites on education issues it is likely that they would differ on non-education issues such as free lunches. Therefore, it seems reasonable to hypothesize that philosophies of school administrators would mirror those of their closest constituents. Among local constituents, self-employed businessmen and entrepreneurs are likely to be the most organized and powerful group, e.g., Chambers of Commerce. It may also be argued that this group is as likely as any to have a stake in the ready availability of a marginal labor force, as needed, at minimum wages. Consistent with the Piven and Cloward thesis, a philosophy leading to the regulation of free-lunch benefits and forcing the poor to work would find more support in a community with a large proportion of self-employed businessmen. As an indicator of the magnitude of the local power elite (PE), the percent of the labor force which is non-farm, self-employed managers is used.

To the extent that the broad community based norm is one of self-reliance with a strong work ethic (*16*), acceptance of a free lunch would have a social stigma attached to it. Among choices available in the census data, the percent of families who are home owners is used to index the importance of the self-reliant norm (SR) in the local community.

The non-farm, self-employed managers amount to an average of 2.23 percent of the total labor force in the 28 districts while an average of 69 percent of the families in each school district own homes. These mean values are at least appropriate proportions to serve as indicators of power elite and broad based community norms, respectively.

Finally, a theory of government responsiveness to the most powerful pressure, regardless of status, requires some attention. It is possible, however unlikely, that the poor will organize to gain welfare rights. Given their experience in the civil rights movement, it is perhaps more likely that the black population will compose a sufficiently powerful pressure group to secure increased participation of all poor in lunch and breakfast programs.

Black leadership in this area has, of course, been potentially viable and effective only since the 1960's. C. Arnold Anderson (*17*) notes that the Southern Education Reporting Service (*18*) reported in 1959 a much lower expenditure rate per student in black schools than in white schools under the National School Lunch Act. To index the effect of this potential coalition for the poor (CP), the percentage of black enrollment in the public school system is included.

In summary, the power elite and self-reliance indexes, when controlled for covariates of the dependent variable, are hypothesized to have a negative effect on free-lunch program participation. However, the index of the black pressure-group variable, representing interests of the poor, is expected to have a positive effect on participation.

Analysis procedures

To test the hypothesis of "under participation" in the free-lunch program simple linear regression of the participation rate upon the poverty rate is performed. The two other covariates of participation, family size and total lunch program participation are added to the regression equation to explain variation in free-lunch participation.

Once the three covariates have been regressed on participation, a second set of regressions including both the covariates and the social structure variables is run. The incremental R^2, i.e., the differences between the R^2 for the models comprised of both covariates and social structural variables and the R^2 for the covariate models alone, will provide a means of evaulating the independent effects of social structure on FL 1972, 1973 and 1974 (*8*).

The signs of the beta coefficients (β) and their relative magnitude will provide a substantive test of the hypotheses. As population data are being used, no tests of statistical significance are discussed. Coefficients are interpreted as descriptive of the region, free of sample error, but subject to the errors of measurement and specification discussed above. Inspection of the zero-order correlation matrix (Table 2), including the three class-structure variables and the three covariates of free-lunch participation, suggests no threats of multicolinearity (19:159–168).[5]

RESULTS AND DISCUSSION

Poverty rates and free-lunch participation

Systematic variation in "under participation" is the first question addressed by the regression analysis (Figure 1). By regressing the free-lunch participation rate (Y) on the poverty rate (X), estimates of the regression slope (B) and intercept (A) provide an average (or predicted) participation rate (Y) for any given poverty rate (X):

$$Y = A + BX$$

These estimates may be used to compute an "average under-participation rate" (U) for any given poverty rate (x) by simply subtracting the predicted participation rate (Y) from the corresponding full participation rate (Z):

$$\hat{U}_x = Z_x - Y_x$$

Note that the full participation rate (Z in Figure 1) is defined to be equal to the poverty rate (X).

Based on an average daily attendance per school district of over 4500 children, each one-percent of under participation (U) implies 45 eligible children are not participating in free lunch. Assuming a meal price of $.50, 174 meal-days per year, and two children per family, each family is forfeiting $174 per year. For school districts with poverty ratios near the region's mean (.30), under participation (U) in 1974, for example, was nearly eight percent (Figure 1). Thus, an average of 180 families ((8×45)/2) forfeited lunch benefits totaling $31,320 per district per year. In districts one standard deviation above the mean poverty rate (38%), about 205 families with two school-age children are affected. These school districts are forfeiting more than $35,600 in free-lunch benefits each year. Savings on free breakfast, milk, and reduced price meals would add many more dollars to the wealth of the community.

As is evident in Figure 1 there are two signs of improved implementation of the free-lunch program. In addition to the regression slope (B) drawing closer to full implementation between 1972 and 1974, also apparent in 1974 is more uniform program implementation. The regressions summarize 43 percent of the variance in participation rates for 1972 and 1973. By 1974, however, 48 percent of the variance is specified by the poverty rate.

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[5] The problem of "spurious" correlations among ratios having common denominators requires discussion. Fuguitt and Lieberson (20.38) point out that correlations between ratios with common denominators (r (y/z) (x/z)), such as PR and FL, coincide with corresponding partial correlations (r/yx.z) only if "the relations between the control variable (z) and the independent variable (x) is linear homogeneous along with the relation between the control variable (z) and the dependent variable (y)." They conclude that if these conditions are not well met, the numerators may be uncorrelated while the ratio correlations are misleadingly high.

Throughout this analysis, these special conditions are well met so that the ratio and partial correlations do not deviate importantly. For example, in 1974, the ratio correlation for PR and FL is .70 (Table 3) while the partial correlation, number below poverty and number claiming free lunch controlled for total number of children, is .68. Thus, the common denominators for these two ratios do not bias the correlations.

Found in Table 3 are the standardized regression coefficients (β) for all three years. The first presented are the step-wise results (β°–β^{2}) of free-lunch participation regressed on PR; PR and FS; and PR, FS, and TL.

Introduction of a second covariates, FS (β^{1}, Table 3), increases the variance explained in 1972 about four percent and in 1973 and 1974 about 10 percent above the zero-order beta (β°) for PR, which presumably accounts for family size. Clearly, the price of self-reliance, holding poverty rates constant, must be much higher for families with three or four children than for those with one or two. In 1973 and 1974, holding the poverty rate constant, an average of 140 more children per school district received free lunch in a system with 2.35 children per family (one standard deviation above the mean) than one with 2.20 children (the regional mean). This increment increased, hand in hand, with the recession and inflation from about 105 children in 1972.

Finally, a third covariate, TL, is introduced. This is an attempt to control statistically for the general quality and acceptance of the school-lunch program. As the R^{2} is increased 6 to 8 percent, this equation (β^{2}) shows that over-all participation, independent of PR and FS, does have a positive influence upon the free-lunch program.

CLASS-STRUCTURE VARIABLES AND PARTICIPATION RATES

Next is the question, "What variables, if any, are inhibiting or facilitating fuller implementation of the free-lunch programs?" Assuming no measurement error, other variables may be responsible for as much as half of the variation in participation rates. Examination of the residuals in the β^{0} equation reveals that no more than four school districts are approaching full implementation. This means all of the unexplained variance falls below the Z-slope (Figure 1). Therefore, any variable found to be positively related to participation while adding to the variance explained is aiding full implementation. On the contrary, negatively related variables adding to the explained variance are interpreted to be retarding full participation.

The third and higher order betas (β^{3}–β^{5}) in Table 3 represent the effects of the three social-structure variables controlled for one another and, successively, the covariates PR; PR and FS; and PR, FS, and TL.

In 1972, as a set these three variables account for only five percent incremental variance above that of the PR covariate. However, rapid inflation and increasing prices charged for school lunch in 1973 and 1974 correspond with a two-fold increase in the incremental variance attributed to social structure variables (β^{3} vs. β^{0} last column, Table 3). For all three years, the signs ($\pm$) for the social-structure variables are as predicted above. Indicators of both community self-reliance (SR) norms and the local power-elites' (PE) economic interests, the homeowners and self-employed variables, respectively, both show negative signs. As an indicator of middle and lower-class coalition for the poor (CP), the percent black enrollment shows a weak, but increasingly positive sign.

However, when two additional covariates, FS and TL, are included the effect of the CP variable is eliminated, while the negative effects of PE and SR remain. The incremental variance attributed to class structure declines as the covariates are added (β^{4} and β^{5}) but the 1973 and 1974 increments are still approximately double the pre-recession 1972 increments.

These results suggest that when family size and the quality of the lunch program are taken into account, percent black enrollment does not influence fuller participation in the free-lunch program. Therefore, in the aggregate, the only evidence that class structures influences full participation in the free-lunch program is negative. In 1974, for example, holding all other variables constant, β^{5}, an average size school district (4500) with PE one standard deviation above the mean is estimated to have 80 fewer free lunch participations than a district with an average PE ratio.[6] This data is consistent with the Piven and Cloward hypothesis that the power elite, reinforcing local school administration, has dissuaded qualified families from applying for free lunch. Several children in these communities rather than pay higher prices or exercise their rights to a free lunch, have apparently resorted to the brown bag or other alternatives (22).

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[6] The average of 4,500 children per school district used for illustration exlude the Huntsville city system. With Huntsville included, the average is 5,584.

CONCLUSIONS

Pending new research emphasizing a broad empirical base, including routine statewide monitoring and analysis, this research anticipates likely trends in the implementation of free-lunch programs under "block-grant" legislation. First, if "under participation" in the free lunch program still exists, as it did in this study of 1974 data, "block-grant" legislation is not likely to reduce federal expenditures.

Second, inflation and, in particular, increased food prices since 1972 underpin the increasing explanatory power of family size on participation in the USDA school free-lunch program. In effect, the price of self-reliance is enough greater for larger families, regardless of race, that increases in school-lunch prices and inflation generally are sufficient cause to acknowledge their official poverty status and to apply for the free-lunch program. Most important for the benefit of the poor is the fact that participation corresponds more closely with poverty rates in 1974 than in 1972 (See Figure 1). Apparently, school districts in this region are generally responsive to economic needs of the poor. With the leverage of the present Federal program, this responsiveness, slow in some communities, will probably continue until such time free-lunch participation is nearly in line with poverty rates.

However, such a happy result is not guaranteed. The effect of class differences may increase in times of relative scarcity in the United States as happens in the face of absolute scarcity in most less-developed countries of the world. This leads to the second question which regards the effects of local discretion on free-lunch program participation.

Local discretion in program design as provided for in block grant legislation is likely to mean smaller free-lunch programs in spite of current (1974) under participation. Piven and Cloward's regulation of the poor hypothesis is consistent with the results of this study. In addition, these results are also consistent with Muraskin's self-reliance hypothesis. Both factors depress free-lunch participation. The implication is that communities with high values on these social structure variables would design programs unfavorable to lower income families.

Also, once the data within this analysis are controlled for family size, there is no evidence consistent with the hypothesis that the civil rights experience has led to a stronger influence by the black community toward fuller implementation of the free-lunch program.

In many communities, the needy and near-needy, be they black or white, may continue to maintain self-reliance, a facade of equality with the middle-class, and the good will of their employer by not pushing for participation in the free-lunch program. These considerations may continue to be judged more important by the near needy than the cash savings of some $80 per child per year.

Ironically, given similar choices, middle-class school boards, city councils, and county commissions almost invariably opt for revenue sharing rather than implementing or exercising local taxing powers. Considering this widely observed tendency, the same local power elite or community self reliance ethic that apparently dissuades free-lunch program participation may readily support a Federally-funded universal school-feeding program.[7]

Most important, equality in the lunch room, an issue faced by every school child in the country everyday, would be enhanced by universal school feeding. Furthermore, this could have payoffs in the classroom.

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[7] Two major objectives which may be leveled against universal school feeding programs are that federal costs would increase and that program quality would suffer (*23*). Since all children can or should eat regularly anyway the total cost, be it borne directly by the parents or by taxpayers through the government, would be the same. Through nutrition education and preventative nutrition practices, ultimate costs of public health should be reduced. The program's quality can still be locally determined. Once the work involved in administering paid vs. free programs is eliminated more resources can be devoted to quality. To provide for additional local accountability families could be allowed partial tax credits if they choose not to participate. Therefore, participation rates would still provide administrators an index of the acceptability of their program.

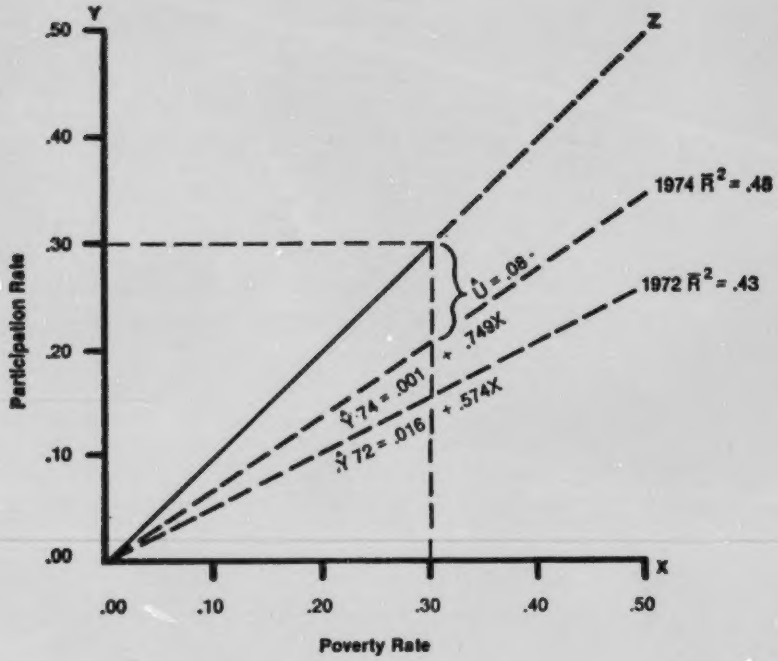

Figure 1. Free-lunch participation rate (Y) for 3 years regressed on the poverty rate (X) (28 school districts) and compared to full participation (Z).

TABLE 1.—MEAN SCHOOL FEEDING PROGRAM PARTICIPATION RATES (AND STANDARD DEVIATIONS) OF STUDENTS IN 28 NORTH ALABAMA SCHOOL DISTRICTS[1]

Program	1972	1973	1974
Lunch (total)	79.78 (8.07)	77.03 (8.20)	75.71 (8.56)
Free lunch	19.17 (6.54)	21.66 (8.72)	22.92 (8.17)
Breakfast (total)	2.42 (3.88)	2.19 (3.89)	2.10 (3.75)
Free breakfast	1.45 (2.41)	1.54 (2.62)	1.52 (2.49)

[1] For these data the authors are indebted to T. G. Smith, coordinator of the School Food Service Section of the Alabama State Department of Education, who opened the records and assisted in interpretation throughout this study.

TABLE 2.—CORRELATION MATRIX FOR THE COVARIATES OF FREE LUNCH PARTICIPATION AND THE SOCIAL STRUCTURE VARIABLES (N=28)

	PR[1]	FS[2]	TL[3]	TL[3]	TL[3]	SR[4]	CP[5]	PE[6]
PR	1.00	0.52	−0.08	−0.04	−0.15	0.16	0.05	0.19
FS		1.00	−.23	−.04	−.16	.28	.53	.28
TL^{72}			1.00	.70	.75	−.13	−.13	−.24
TL^{73}				1.00	.71	−.07	−.13	−.06
TL^{74}					1.00	−.05	.14	−.17
SR						1.00	.08	.26
CP							1.00	−.12
PE								1.00

[1] Poverty rate (PR) is computed by dividing total related children under 18 into total related children under 18 in families below 125 pct of the poverty line; that is, Data Descriptor (DD#)=((098010+098014)/085000)#(10).

[2] Family size (FS) is total related children under 18 divided by total families with related children; that is, DD#=(085000/(084002+084005+034003+084011))#(10).

[3] Total lunch (TL) for 1972–74 is total lunches served divided by total attendance (State Department of Education, 1972–74).

[4] Percent homeowners is used to index a community self-reliance norm (SR); that is, DD#=(036001/036000)#(9).

[5] Coalition for poor (CP) is indexed by computing the percent of school enrollment which is nonwhite (21:50).

[6] Power elite (PE) is indexed by computing the percent of the labor force (16 and over) which is nonfarm, self-employed management; that is, DD#=((058010+058011)/058000)#(10).

TABLE 3.—MULTIPLE-REGRESSION ANALYSES OF FREE-LUNCH PARTICIPATION RATES FOR THE 28 SCHOOL DISTRICTS OF 13 NORTH ALABAMA COUNTIES, 1972–74

Statistic[1]	Class structure			Covariates				
	MC[b]	CP[c]	PE[d]	PR[e]	FS[f]	TL[g]	R^{-2} [2]	$>R^{-2}$ [2]
X	0.690	0.103	0.022	0.305	2.20	([3])		
SD	.070	.095	.008	.076	.147	([3])		
1972:								
r^0	.06	.16	−.44	.67	.55	0.18		
β^0				.67			0.43	
β^1				.52	.29		.47	
β^2				.51	.36	.30	.55	
β^3	[4] −.22	[4] .02	−.37	.60			.48	0.05
β^4	[5] −.24	[4] −.09	[5] −.32	.50	[4] .25		.49	.02
β^5	[4] −.21	[4] −.09	[5] −.29	.48	[5] .33	.28	.56	.01
1973:								
r^0	.02	.27	−.46	.67	.63	.24		
β^0				.67			.43	
β^1				.47	.39		.53	
β^2				.46	.44	.32	.63	
β^3	[5] −.27	[4] .13	−.37	.61			.54	.11
β^4	−.29	[4] −.01	[5] −.31	.47	[5] .33		.58	.05
β^5	−.26	[4] −.09	[5] −.23	.44	.45	.29	.65	.02
1974:								
r^0	.04	.29	−.44	.71	.64	.21		
β^0				.71			.48	
β^1				.51	.38		.57	
β^2				.49	.43	.29	.64	
β^3	[5] −.23	[4] .17	−.31	.65			.57	.09
β^4	[5] −.25	[4] .04	[5] −.26	.53	[5] .29		.60	.03
β^5	[5] −.25	[4] −.05	[5] −.22	.48	.42	.27	.66	.02

[1] X=mean, SD=standard deviation, r"o"=zero-order Personian correlation with free-lunch participation and β=the standardized regression coefficient with postscripts (0–5) denoting the number of variables being controlled.

[2] $R^{-2}=R^2$ adjusted for degrees of freedom (8), and $>R^{-2}$=the incremental variance explained by class-structure variables above that explained by the covariates alone, for example, β^3 1972 has an R^2 of 0.48, 0.05 more than β^0 1972.

[3] See table 1.

[4] Regression coefficients are less than 1.5 times as large as their standard errors. As these are population data, tests of significance are not appropriate.

[5] Regression coefficients are 1.5 to 2 times as large as their standard errors. All other regression coefficients are more than twice as large as their standard error.

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Natural Resources, Food and Farm Policy,
Seattle, Wash., April 25, 1978.

Hon. Patrick J. Leahy,
U.S. Senate,
Washington, D.C.

Dear Senator Leahy: In response to your letter of April 5, I am pleased to learn of your interest in non-farm rural development research in USDA. This is an area much overlooked in the process of rural public policy development and you are to be congratulated for devoting the attention of your Subcommittee to it.

There are three areas of concern which come to my mind as deserving of your consideration as you examine this subject. The first is the role of the public in determining research priorities and policies for the publication of findings. Anyone who has been involved in rural development work for any length of time can cite instances where decisions regarding research to be undertaken or published have been motivated by political considerations serving the interests of the researching institution. That decisionmaking process should be brought out into the open and the best way to do that is to provide for public oversight and participation.

A second concern is the need for greater involvement of non-land grant university participation in USDA supported rural research. This was authorized in the Rural Development Act of 1972 but, to my knowledge, has not been widely implemented. There is a great need to link rural development research with other disciplines which are frequently not well represented within the land grant universities. Perhaps greater support should be given to contracting with non-institutional research entities which can make interdisciplinary linkages without the political constraints of the university system. These are possibilities which deserve greater attention.

Finally, the USDA research system has been grossly negligent in examining the connection between changes in the structure of ownership of rural resources and the well being of rural communities. The ownership of farmland, for example, has been approached as a purely farm question without consideration of its consequences for the whole rural community. This is a further reflection of the disciplinary specialization which seems to be inherent in the current research structure. There is an urgent need for some in-depth analysis of how the ownership of rural resources, farmland, timber, energy reserves, etc., is changing and how the consequent changes in the flow of earnings from these resources is impacting on rural community life.

Best wishes for a successful series of hearings. If I can assist further in any way, please do not hesitate to call on me.

Sincerely yours,

STEPHEN E. BOSSI.

COLORADO STATE UNIVERSITY,
DEPARTMENT OF ANIMAL SCIENCES,
Fort Collins, Colo., April 26, 1978.

Senator PATRICK J. LEAHY,
U.S. Senate,
Russell Senate Office Building,
Washington, D.C.

DEAR SENATOR LEAHY: I do indeed appreciate your contacting me about your scheduled hearings on the Agricultural Research and General Legislation Subcommittee of the Senate Committee on Agriculture, Nutrition and Forestry, on May 4 and 5. Although I have lived in Colorado for a long time, I am also concerned with the agricultural production of the Northeast which is where I was born.

With respect to questions I notice that the first question is about how to define rural development and I would agree that this is very important. Once this has been done I think it is also important to define the clientele for information on rural development. It seems important also to determine to what extent rural development includes production in marketing of food products or whether the emphasis will be upon subsistence food production. An associated question is whether it is necessary to assess the energy and economic efficiencies concerned with rural development or whether it is considered that the social benefits of development override the questions of economics. The type of information required by people interested in small scale agriculture are clearly of a different scale than commercial agriculture. Does this mean that new research programs are necessary to develop information for this clientele or can the necessary information be obtained by scaling down from commercial agriculture?

These are some questions that occurred to me. I will certainly look forward to obtaining a copy of the hearings when they become available.

Sincerely,

GERALD M. WARD, *Professor.*

University of California, Davis,
Department of Applied Behavioral Sciences.
Davis, Calif., April 27, 1978.

Hon. Patrick J. Leahy,
U.S. Senate,
Russell Senate Office Building,
Washington, D.C.

My Dear Senator Leahy: Thank you very much for the letter of April 10, 1978 informing me of your Subcommittee's upcoming hearings on "The Status of Non-Farm Rural Development Research within the USDA and the State Land Grant System." I hope that some of the work we have done in California will prove useful to your Subcommittee during the course of its deliberations.

I am enclosing copies of several papers which I feel are quite relevant to the topic under consideration; these will be briefly discussed within the context of your *Hearings Outline*.

Perhaps the best way to present these papers is in their chronological development. The paper "The People and the University: A Conference to Initiate the Redirection of Priorities for University Research" was concerned with finding out what non-traditional audiences thought about the Land Grant research and extension process. This was the first paper generated by Professor Isao Fujimoto's California Agricultural Experiment Station research project entitled "The Social Implications of Agricultural Research" and seems to fit under item IIC$_2$ of your *Hearings Outline*.

The Fujimoto research group also looked at two other key components in the research process: administration and researchers. The paper "Rural Non-Commercial Research—The University of California: A Case Study" examined the former component, and demonstrated the improbability of changing research directions and reordering priorities without a concomitant change in the institutional structure (*Hearings Outline* IE, IIA, and IIB).

"What Research Gets Done at a Land Grant College: Internal Factors at Work" carried this theme down to the level of the individual researcher and emphasized the following factors in research choice: quest for knowledge, funding, academic socialization, and sensitivity to pressing social needs. These findings were based on interviews with 75 A.E.S. scientists (departmental chairpersons, tenured, and non-tenured faculty) and are summarized in the chart on page 36 (*Hearings Outline* IIA and IID).

The next paper "Evaluation of Cooperative Extension Efforts at the County Level: The University of California Example" examined this State's county-level Extension component; specifically focusing on Cooperative Extension specializations, budgets, and manpower and their "fit" with the social and agricultural conditions of the counties within which they are located. The findings showed that Cooperative Extension activities correlated quite positively with the "modern rational agriculture" factor; they had almost no correlation with the "traditional family farm" factor; and they had a strong *negative* correlation with the "Rural Isolation and Poverty" factor. These findings have major Rural Development policy implications for California (*Hearings Outline* IIIB).

The last paper "Toward a Unified Agricultural Policy for the State of California" is in reality a proposal submitted by our Agricultural Policy Group which succeeded in gaining acceptance as one of four projects (out of 110 applicants) funded by a joint University of California/State Legislature program under the *California Policy Seminar* series. The emphasis of our proposal is clearly on Rural Development from a unified, as contrasted with the traditional fragmented, perspective. This concern ties-in directly with items IG, III, IIA$_3$ and IIIC of your *Hearings Outline*.

My dissertation is concerned with many of the same topics raised in your *Hearings Outline*, and I would naturally be most appreciative of any and all information generated by your Subcommittee. Would it be possible for me to request two copies of the Hearings testimony and exhibits? This information would be most valuable to me in my work.

Thank you again for your letter soliciting my input for the Subcommittee. I am really pleased that you are conducting these hearings!

Sincerely,

Emmett P. Fiske.

Enclosures.

ABSTRACT FROM "TOWARD A UNIFIED AGRICULTURAL POLICY FOR THE STATE OF CALIFORNIA". SUBMITTED BY EMMETT FISKE, ET AL. (UNDATED).

ABSTRACT

Based on a wide array of talents from many disciplines, the agricultural policy group (see names and affiliations on the title page) proposes to assemble information necessary to provide a coherent picture of the agricultural and rural socio-economic system in the state of California. Questions we are proposing to address include, for example, (a) the characteristics of an adequate research base for enlightened agricultural policy formation; (b) the relationship between technology (new forms of energy, pesticides, mechanization) and farm and small community organizations; (c) the relationship between farm size, the quality of small community life, and production, including specific examination of the 160 acre limitation; (d) the organization of alternative systems of food production, markets, and consumption. The methods we propose to use are: (1) assembling existing information on these questions, (2) establishing research priorities within the group, and (3) developing procedures to produce new and needed data. On this last point, the group aims to develop a model for future interdisciplinary agricultural research based on ecological principles. We are not proposing a full-scale planning model for California agriculture. However, we believe that within the grant period we can provide a detailed analysis of important social and economic relationships and/or impacts which can be consulted in the formation of policy, and the development of a comprehensive model.

ENCLOSURES FROM FISKE LETTER

Because the materials submitted were so detailed, only those pieces not commonly available from indicated sources are included in the record. However, all materials submitted are noted here, and in the bibliography.

1. University of California at Davis, 1973; Summary of "The People and the University", Proceedings from a Conference to Initiate the Redirection of Priorities for University Research, (June 22).
2. Fiske, Emmett P., and Martin Zone, 1975; "Rural Non-Commercial Research, The University of California: A Case Study." Paper presented at the Annual Meetings of the Rural Sociological Society, San Francisco, California (August).
3. Fujimoto, Isao, and Emmett Fiske, 1975: "What research Gets Done at a Land Grant College: Internal Factors at Work". Presented at the Annual Meetings of the Rural Sociological Society, San Francisco, California (August).
4. Fiske, Emmett P., 1977; "Evaluation of Cooperative Extension Efforts at the County Level: The University of California Example." Presented by the Annual Meetings of the Rural Sociological Society, Madison, Wisconsin. (August-September).
5. Fiske, Emmett P., et. al., 1971: "Toward A Unified Agricultural Policy for the State of California." University of California at Davis, California.

SUMMARY OF "THE PEOPLE AND THE UNIVERSITY"

A CONFERENCE TO INITIATE THE REDIRECTION OF PRIORITIES FOR UNIVERSITY RESEARCH

Convened on June 22, 1973, University of California, Davis, Calif.

We would like to hear from you—feedback on the conference, suggestions for future work, or any other comments you want to make. Please address correspondence to Isao Fujimoto, Department of Applied Behavioral Sciences, University of California, Davis, California 95616; Phone: (916) 752-1805 or 752-0770.

INTRODUCTORY REMARKS

(By Isao Fujimoto, Moderator)

This conference on "The People and the University" can be considered a very radical departure for a land grant college to be undertaking, or it can be interpreted as a very conservative move—it all depends on how you look at things and the words we choose to explain what we see.

When I used to be involved with the concerns of foreign student visitors, I recall one student being briefed on the social graces. This concerned ways to express appreciation and praise to a hostess. "If you really want to tell an American hostess that things are great and she is also great, tell her she's 'cool' " was the advice given. So, at the end of this particular gathering, the student who was given the advice on interpreting things as "cool" was overheard to say, "Gee, lady, you know, you don't look so hot."

Whether or not we're doing the "cool" things is not so important as the fact that the concerns are "hot" and relevant. The focus of this conference is to consider the concerns of different publics which have legitimate claims on the resources of the University and to also examine the priorities of research and action that appear to be creating greater social inequities.

It'd be instructive to review some of the predecessors inspiring the call for this conference. On the surface, it appears that many of the forerunners to this gathering here can be labeled "radical." The most immediate event was the recent National Conference on Land Reform. This gathering, held in San Francisco just this April, gave some attention to the role of the University as it affects the quality of life, as one of the issues pertaining to the institutional crisis in this country. The responsibility of the University was highlighted about a year before, with the publication of *Hard Tomatoes, Hard Times* by the Agricultural Accountability Project. They put the finger on a lot of barriers, touched or untouched by land grant colleges. Going back a couple of years, the ecology issue with everyone—including and especially the establishment getting into the act—brought a lot of questions and suspicions. But the movement did have some impact on the University system. Going back further on this campus, about six years ago, a couple of departments were confronted by students sitting outside their doors challenging the faculty to confront questions such as, "How does the University research on mechanization support riots?" In other words, what has been the social cost of the priorities placed on technological advancement without consideration of its implications? In some ways, we can trace our concerns back to the efforts of Ralph Nader. But I'd like to take the issues being raised in this conference back more than a hundred years to the original mandate of the Morrill Act of 1862. The charge given to the land grant colleges then was "to serve all the people." I see us trying to follow through on this original mandate. That some people can interpret what we're trying to do here as being very radical suggests that it isn't people who take seriously such charges as "radical," rather it's that something drastic has happened and is happening to this society. Rather than contribute to the problem by non-involvement or mutual suspicion, it's time that people and the University got together.

Instead of a Faustian University creating sorcerer's apprentices, we need a situation where the University produces knowledge that truly serve the people.

So we brought together people who can articulate some of the questions and concerns to the different publics that are part of "the people" that the Morrill Act intended that land grant colleges serve. And also, we're glad to have with us the participation of various faculty that have expressed interest in the questions that are being raised. Among those gathered today are those associated with family farms, organic farming, alternative approaches to marketing and consumer concerns, technologies that stress non-wasteful use of energy, as well as those active in organizing people out of poverty—be it moving farm workers into cooperative farming ventures or raising big questions on the nature of power and the distribution of resources in this country. I think there's a lot we can learn from each other.

What we'd like to focus on this morning is to hear presentations from the various constituencies on how they see the University, especially on the issues and questions that concern them, and how they see the University responding to them. Hopefully, there'll be some laying out of an agenda of questions that will challenge those who are part of the University system to investigate as part of their research thrust.

To questions concerning the origins and auspices of this particular conference—the impetus comes basically from several projects on the UC Davis campus, directed towards issues that have arisen because of the primary attention given to production agriculture and agribusiness. One of these is a project looking into the social implications of research, examining what's been done and why, also raising questions about the costs as well as benefits, especially in human and social terms. Another group has begun to examine the alternative technologies particularly the development of low energy use strategie. A third project focuses on the factors contributing to the viability of small family farms. It's been the deliberation and joint thinking of individuals connected with these projects that brought about this conference, with the prime auspices being assumed by the social implications of research project.

Inasmuch as this conference focuses on questions, a comment concerning question-asking might be in order. I know that we've all been told that there is no such thing as a dumb question. It's not so much whether a question is dumb or not. A more important distinction to make is to ask whether or not a question is honest. Honest questions are those that are raised to get at information, to seek our knowledge. Dishonest questions are those that are used to deflect attention, to put off the speaker, or to by-pass what the issues might be. I would hope that the stress would be on the raising of honest questions. A similar distinction might be made on the discussion concerning growth and efficiency. The question is not so much whether growth and stress on efficiency is good or bad. The important distinction is to ask whether moves for growth and efficiency are socially responsible or irresponsible.

Letter From Jim Horgan, Research Director, United Farm Workers, AFL–CIO

First of all, as you must know, the United Farm Workers and many others regard UC Davis as an instrument of the growers—a research subsidy to go along with their water subsidy, tax subsidy, labor subsidy, and direct payments subsidy. A very nice set-up, paid for by the taxpayers. What I hear you saying is that there are people at Davis who want to change this, people who are asking, "What can we do?"

I suppose there are three approaches you could take:

1. *Stop the machines.* It seems to us that the model your research specialists are aiming toward is the 40,000-acre Superior Farming Company, whose computerized and automated grove heaters, drip irrigation systems, and mechanical harvesters have produced a "marvel of technology applied to agriculture." But what's been the cost in people's jobs and lives? "Efficiency" apparently has no room for farm workers.

We know what a close relationship outfits like Superior have with UC Davis. We've seen the bumper stickers in the Viticulture Department—"Eat California Grapes, the Forbidden Fruit" and "Chavez Eats Grapes." That doesn't surprise us. We know where you're at. And we don't object to efficiency in agriculture. But we do reject irresponsible "efficiency" which gives no care for the lives of the farm workers who, like the growers, make their living in agriculture.

We're not so naive as to believe that this cold-hearted research apparatus can be halted, but you and our supporters there know the University better than we do, and you may have some ideas on that.

At least there could be pressure to force the growers to pay for their own research, rather than feed off the taxpayers. Farm workers are taxpayers too. What is Davis doing with their tax money, other than using it to destroy them? The rationale that such research helps promote agricultural efficiency and increase the nation's food supply, and thus is "good for America" is a phony one. Would factory workers tolerate a government grant to General Motors to study ways to increase efficiency by eliminating their jobs? Research should be done to promote jobs, not eliminate employment. The public's money should be used to benefit the public.

2. *See that genuine consideration is given to farm workers.* Agricultural economists and grower research specialists always seem to speak of them as "farm labor," a "cost factor" to be reduced or eliminated. So, if they're just a commodity to be evaluated and dealt with, no one has to consider farm workers as people. And clearly, those grower researchers don't.

But perhaps you could bring some real consideration to bear for the effect of that research on farm workers.

We know that many of the mechanical harvestors are not designed to save money for the growers and in fact, are not cheaper to operate than harvesting by hand. Their real purpose to is get rid of farm workers so the growers can escape from the farm workers' union. That's no secret. The growers cry, "Chavez is coming! Give us machines!" And the University obliges.

The effect on farm workers needs to be considered. I'm not suggesting a token farm worker representative on the committees that decide these things. When Arizona passed its right-wing anti-union law last summer, Governor Jack Willians was quick to offer a seat on his five-member Agricultural Labor Relations Board to the UFW, who would have joined two growers, a Teamster, and a "neutral" representative of the public, who would have set down rules by a 4-1 vote to destroy the farm workers' union in Arizona. We rejected this generous offer, just as we would have done the proposal Ronald Reagan was ready to make had Proposition 22 passed last fall.

In the past year or two, ecology groups have pressured government to force industry to undertake "environmental impact studies" before any reckless construction is publicly funded. I don't know if those things are really any good, but at least they force a consciouness of the environment. Maybe you could push to see that "farm worker impact studies" are done and that no research proceeds which would take away their jobs and wreck havoc with their lives.

And you may know other tactics which would force the University to give genuine consideration to the effect of its research on farm workers.

3. *Use the resources of the University to help farm workers.* We have found in our eleven years of organizing that we are only successful when we have power. The forces farm workers are up against are powerful and entrenched—the growers, the politicians who cater to them (especially the Republicans), and company unions they fabricate (especially the Teamsters), and the public institutions they manipulate (especially universities like Davis).

Our goal is to organize the two and half million farm workers in the United States. The weapons we have are the power of our members to strike and the power of our supporters across the country to boycott those commodities to bring econmic pressure to force those growers to recognize the right of the farm workers they employ to have the union of their choice. Appeals to reason, morality, and democracy are useless. They only understand economic power.

Obviously, knowledge is a kind of power too. And you're sitting on a gold mine of information at UC Davis. What we need is anything which will enhance our power to deal with the forces we're up against. I don't mean studies of farm worker attitudes or re-training programs. Farm workers don't want to be re-trained. They want to live and work in dignity. And that's the fundamental purpose of the union.

You must know, better than we do, what sources of information you have that would help us understand this agricultural complex and deal with it more effectively.

Those of you who support us can be helpful in our success, and we welcome your assistance. Stop the machines, if you can. See that genuine consideration is given to the effect on farm workers of the research your university is doing. And as a public institution, share with us the information you're producing on American agriculture. We're part of agriculture too. And our union is here to stay.

SUMMARY OF PRESENTATION BY WENDELL LUNDBERG[*]

NATIONAL FARMERS ORGANIZATION

Mr. Lundberg began by talking about the changes in the University in the twenty years since he attended. "At that time, it was quite popular to think of good farming practices in terms of rotation, as using cover crops, and other things that had been developed to increase the production of our agricultural industry. But at the same time, we were addressing ourselves to another word that had something sort of magic about it—that was efficiency. It was a word that was going to cure everybody's ills—it was the way you were going to survive . . .

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[*] Mr. Lundberg is an organic rice farmer in Dutto County and the Vice-President of the National Farmers Organization; he is also interested in catfish hatcheries.

"Since then, we've replaced committed producers with speculators and money managers—people who have completely lost the goal that the original people in agriculture had . . ."

Today, the right to share in the wealth, to be involved in the (agricultural) industry has been taken away, because we have become disoriented. Efficiency has been applied to the wrong thing—not to people oriented efficiency, but money type efficiency—what can make the most dollars, not what is best for people . . .

Mr. Lundberg and his three brothers have built up a farm of approximately 3000 acres. "But our days are numbered—we're going to be replaced because someday we're not going to be efficient; we're not going to be able to compete . . . I think our goals have been poorly established—not on production of quality food, but on how cheap it can be produced. We haven't established our research in the best way to do things, but rather, who is giving the grants and how do these things make money for those giving the grants."

There are many ways to solve the production problems of agriculture. There is work being done on weed control in rice, but none biologically or mechanically, "because the grants aren't available." Money is given to test chemicals so that companies "can extract money from agriculture and make a profit."

Mr. Lundberg then talked about natural weed control systems—flooding, water control, crop rotation—but these aren't important to "most people" because they don't make money for companies.

"Another thing we need to do is make the consumer more involved in the production of his food . . . This could communicate to the producer what the person wants and educate the consumer to some of the problems that producers have."

Mr. Lundberg went on to talk about the rise in food prices—This is the first time I've seen prices as good as when I started farming 20 years ago. The cost of production has gone up tremendously."

But our key goal is producing food cheap, not producing quality food (the goal of general agriculture). I think that our biggest problem comes in reorienting ourselves and the industry and the University to adequate and proper goals that have a long term good effect. I got involved in organic agriculture because I felt an obligation to leave the land in as good a shape as I found it. We take trouble not to burn our rice straw, try to rotate, try to grow green manure crops—try to maintain this resource for later generations. But at the present time, the way we are being oriented toward efficiency, people can't afford to rotate, to work the straw in, and they must use chemicals to get the price up (since the price is so low). . . .

So some of the problems come from consumer unawareness. The consumer has to get more involved . . . We need a redirection for our goals, a re-education of the consumer, and a teamwork effort to solve the problems.

Summary of Presentation by Bernard Bricmont[*]

California Certified Organic Farmers Organization

Mr. Bricmont began by giving some information about his organization. "We have organized in California to certify organic growers, to certify the food that they produce—that it is pesticide free and that the soil management is such that it builds up the soil and that no chemical sprays or fertilizers are used. We are involved in consumer relationships because we have consumer representatives on all of our certification visits; there is also a consumer representative on our board . . . We will be brand identifying in that there will be a sticker on the product, either on the package or on the crate or tag telling the consumer that this is a certified product, so that people will have some reference as to where the food is coming from."

Some of the areas Mr. Bricmont mentioned his organization would like to see researched are:

1. Plant resistance to insects and diseases;
2. Food values of particular crops—"is the consumer buying food or is he buying bulk?"

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[*] Mr. Bricmont is the Vice-President of the California Certified Organic Farmers Association, an association of some 56 farms in California. He is an engineer in San Jose and a farmer in Santa Cruz. Due to the illness of F. F. "Cal" Slewing, Mr. Bricmont kindly agreed to speak on very short notice.

3. Biological control of insects and diseases;
4. Marketing and food handling problems of the small growers—"Everything has been oriented around such large quantities that the small grower can't process his own food, and this is where it is at. If the grower can deliver his product prepared to the market, then he will get his share of the wealth in return."
5. Large scale composting—cooperation with cities to recycle urban wastes;
6. Packaging grades—"These have been based strictly on appearance, not on food value or nutritional value."
7. Consumer interaction with the farmers—"The more the consumer knows, the more they'll demand better products."

SUMMARY OF PRESENTATION BY CLIFF HUMPHREY[*]
ECOLOGY ACTION EDUCATIONAL INSTITUTE

"Society today has a basic interest in its own destruction. Today, we are interested in one part of society, the farm. But we must recognize the relationship of the farm in the context of the larger problems of society * * * to make sure that we don't find ourselves in a self-contradictory or self-defeating situation as we make plans on into the future.

"The population draw is not outstripping the ability of the earth's resources and the life support system to meet that draw.

"* * * We shouldn't lose sight of the new patterns of farm labor—whereas we used to have farm hands that lived on the land and were paid annually, you now have contract labor, and so the person who owns the farm wants a minimum amount of hourly contracted labor so there isn't the possibility of doing the fence mending or the soil conservation work that was done during the slow months that we had in the past . . .

"The environmental movement, because it is oriented to the cities, has been extremely short sighted not to become involved in the basic issues of soil conservation. Once we stop putting filth in the air, the air will be clean; once we stop silting our rivers and filling them with dissolved solids, they will be clean. But as you all know, once the soil is gone, it is gone; and it takes a long time to build that base back."

According to Mr. Humphrey, perhaps the most basic problem that we face today, both in agriculture and in our society as a whole, is that the decision-making process is one and the same with the capitalization process—"If you can't capitalize it, you can't do it. We are imposing man made institutions that are expedient for us in the short run at the expense of the long term benefits of biological or natural systems * * *"

"* * * We have to develop the confidence that we can do social inventing with the same confidence that we can develop new equipment * * * We need social engineering on the same scale as mechanical and scientific engineering. Of course, it is a political problem—you have the problem of the University becoming involved in the political process—I don't think we can avoid that. I think we have to face this thing head on and apply the resources of the University that comes from the people in society to design the kinds of changes that we must have to survive.

"We must build survival value into culture, and this will be done in a very premeditated and planned manner."

Agriculture's role in this is fundamental. According to Mr. Humphrey, we are now dependent on techniques that are exploitative of the land, the farmer, the farm worker, and the consumer. "Emphasis on efficiency is a trap as we consider a more human oriented form of agriculture and society."

"The dollar success of agriculture allows a familiar succession from the farm to urban expansion, and then a very successful ring of retail establishments and service establishments for the farming community on the periphery of this urban area, urban decay within the center of that urban area as the ring continues to expand out into the farmland and then factories coming in and employing those who are available for a low hourly wage."

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[*] Mr. Humphrey has been active in the ecology movement since its inception. He was originally active in Berkeley, but once he got Ecology Action going, he started thinking—"Berkeley is kind of an anomaly because any change program could happen in Berkeley, so we'll go somewhere else for a better test." He picked Modesto and started the Ecology Action Educational Institute.

Mr. Humphrey now sees this succession going on in the central valley—trucking firms from LA are requesting to move into Modesto. It is cheaper to pave over some of the "fringe" farmland for the trucking operations than it is to pay the taxes in LA.

"So, in the move to decentralize agriculture—to have more small parcels, more owner operated parcels—we must exercise extreme caution or such a policy will result in massive urban sprawl. If we have people in increased numbers moving back to the land with the same expectations of society today, the movement will be a self-defeating one."

Mr. Humphrey then commented on a project entitled "the metabolism approach to environmental research." According to this theory, in agriculture we have to look at the basic relationship between the fertile land where our habitat is, the water, and the energy relationships. And we may have to design new matrices of where people live, how they grow their food, and how they eat. We may have to design new relationships to reach the values and goals we're pursuing without continuing some of the evils our society is trapped in today.

"* * * We must move ahead with a minimum of indebtedness and a maximum of sharing * * * And so while we need new forms on the land in terms of new machines, alternative energy sources (such as methane), we also have to learn to make do with a minimum amount of steel per person, a minimum amount of irrigation pipe per acre, a minimum amount of horsepower per acre . . .

"* * * These are the kinds of questions we have to be willing to raise. We have to organize ourselves perhaps into new units to allow the success of smaller production units and maintain a maximum number of acres in production."

SUMMARY OF PRESENTATION BY ROBERT VAN DEN BOSCH[*]
DIVISION OF BIOLOGICAL CONTROL, UC BERKELEY

"I am a survivor . . . the going has been rough. In response to a recent article I wrote for *Organic Gardening*, which evoked some of the most horrendous tirades out of some of our farm advisors that I have ever read or witnessed, one farm advisor wrote me that when he had mentioned me to one of his entomologist friends, the response from the entomologist was, 'If van den Bosch's scientific integrity were to be measured on a scale of 1-10, his integrity would have to be measured in ppm.' This is the kind of stuff I'm forced to take and I love it. I've got a retort coming up in Rodale Press—if they publish it in Organic Gardening Magazine, they'll have more guts than I do because the farm advisor pretty well runs down Rodale Press, but the name of the thing is "Bouquets from the Penal Farm."

Dr. van der Bosch went on to say that the original charter of the University of California is what gives it its uniqueness, and it worries him that this charter is being attacked.

The issues that he was concerned about ten years ago at Riverside are just now surfacing as issues for University involvement. "I have referred to the Experiment Stations in the past as craven political places, and I don't back off from that opinion one bit. The agricultural colleges too often submit to the power of groups—the groups with political and economic power."

As an example of this capitulation to power, Dr. van den Bosch described annual meetings at UC Riverside where representatives of Sunkist came to the campus to see what was going on. Out of one of these meetings, Dr. van den Bosch was ordered (through his department chairman via the dean) to stop the work he was doing and devote full time to working on an aphid that transmits diseases to citrus. His refusal to do this was one of the things that led to his dismissal.

In regard to the recent law passed for licensing pest control advisors, Dr. van den Bosch said that the University got involved when the Council of California Growers, scared because a better law almost got passed, asked the University to write another law better suited to the interests of the Council—another example of the capitulation to the powers that be. It is Dr. van den

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[*] Dr. van den Bosch is an entomologist and Chairman of the Division of Biological Control at UC Berkeley. He has been associated with the pesticide issue, dealing with questions on the politics of pesticides and why insects keep being such a problem despite all of the chemical input; he is also working on a study of alternative pesticides.

Bosch's opinion that the present law has set pest control advisors back a long way.

"As far as integrated control and biological control are concerned * * * we are making headway, although there are people constantly harassing us." The Division of Biological Control has suffered the same budget cuts as the rest of the University, so the amount of money they are getting is not all that great.

Some people say that the research role of the College of Agricultural Sciences should be wiped out, but Dr. van den Bosch feels that the University should have the role of watch dog. In other words, if the University doesn't do agricultural research, we open a vacuum. The University is not fulfilling its role—it has traditionally sided with the powers that be. The University, according to Dr. van den Bosch, should be the fair-minded element in the research affair.

"The most crucial change that I can see in the University of California's changing role * * * is to change its posture. And if this doesn't happen, the agricultural colleges will be shut down, because the public isn't getting much out of them. There is the potential to do a great deal of sociological and ecological good within the framework of the Division of Agricultural Sciences, as well as to increase production efficiency. We need an overall philosophical change in the University."

The University will have to put its money where its mouth is to back these changes financially.

SUMMARY OF PRESENTATION BY DAVID TALAMANTE,* EL RANCHO DEL SOL

When El Rancho del Sol began five years ago, they started analyzing the kinds of problems farm workers would face ten years after, and how they could solve these problems. After having been involved in several projects, "* * * we realized that we had to get part of the economic pie in the County." Some of the biggest industries in the Valley were located in Stanislaus County with more coming in and farm workers had few choices—either go on welfare, migrate elsewhere, or fight the Teamsters or large conglomerates—to survive. Thus, much of the energy of El Rancho del Sol was spent trying to survive; there was no time for research. "We haven't had the opportunity to utilize the University of California * * *"

One of the goals of El Rancho del Sol was to implement a corporation that would serve farm workers and be run by the farm workers. The cooperative started with 350 members—Chicanos, Blacks, Okies. However, later each group decided to organize its own economic base.

Although they had originally planned to begin with 200–300 acres of land, under the advice of Mr. Joe Yonan, a small farmer in Stanislaus County for over 40 years, they decided to start with a smaller plot in order to learn and educate themselves about the problems they would face. Three years ago, with 20 families, they approached the Extension Service of Stanislaus County for assistance and were met negatively. "They said we would never be able to organize ourselves into a farm worker corporation and do what we wanted to do * * *" Farm workers of El Rancho del Sol were not able to get the necessary information for the Extension Service; however a UC student working in Stanislaus County was able to get assistance from Extension and do some of the necessary research.

They found a plot of land abandoned by the University of California, occupied it, developed it, and then went through the legal channels to acquire the land. They now have it on a lease with an option to buy. But El Rancho del Sol encountered problems. "First, to be able to get the research that we needed done, we had to have hearings; we had to appear before the Senate Subcommittee on Migratory Labor . . . and we testified to the fact that we just couldn't get any information . . . it's strictly the elite that get the research, because of the politics involved. In Stanislaus County, the large growers, conglomerates and industries control the taxpayers' agencies. And we had no base—political or economical. So this gave us more reason to organize. We started reaching out to people who had more contacts and little more political influence than we did. We went before various senators, congressmen, assemblymen, and local legislators to protest and complain about the way we were treated by the Extension Service. It came out in a public debate between the director of the Extension Service and myself in the papers and continued for about three weeks, until finally I got a letter of apology from him because of the Senate Subcommittee hearings. Since then, we've had a good relationship working with them. I'm trying to point out the kind of political pressure it took for us to organize ourselves and show that we also had some political clout in the County."

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* David Talamonte is the President and one of the founders of El Rancho del Sol, a cooperative farming enterprise comprised of about ten families of farm work background in Keyes, California.

There were other problems: Last year, everything planted by El Rancho del Sol was organic, but because of the organic process and lack of information, the crops were late and they didn't get the best prices. This year to avoid this, they planted earlier, but as a result got insects, so ½ of the crop is organic and ½ is not. Mr. Talamante emphasized the fact that information from the Extension Service could have helped to prevent this. But they gained experience.

"If the University of California would work in conjunction with the farm workers and help with research, then the consumer would get the end result of better products, savings, and most important, the concern that the people themselves are getting the best product. But instead, this (information) goes to the power elite, the elite society. And whether we can change this structure or not, I don't know, but we're doing it on our own. We're not waiting for the University to change the structure or to deal with our problems, but it would have helped; what has taken us five years to accomplish could have been done in one with the research you have available here."

"None of this wealth, none of this research has gone out to the people themselves. I don't know whether we can change this, but I do know that it's going to take more than just the people in this room and more than just discussion. There's going to have to be some political muscle, legal action, and the kind of work we're doing." Mr. Talamante stressed the importance of organizing a coalition of small farmers and farm workers and other groups neglected by University research; a coalition of those with practical experience and those with technical konwledge.

According to Mr. Talamante, research alone is not sufficient. We need to ask, ". . . what kinds of actions can we take to implement the research? . . . you have millions of dollars of research . . . but when you're ready to implement it, the powers that be come down on you. It's going to take more than being in one room and talking about it; we're all going to have to organize . . . not just the social problems, but we also have to look at the marketing problem. Who controls the markets? Who makes the money? We have to have input on every level of the game in agriculture—from the top to the bottom.

"The University started with being concerned about human beings, but somehow or another got away from it, and now we have to bring it back to the people. And we can do it, but we have to work together to understand the problems that each of us faces and how to deal with them."

SUMMARY OF PRESENTATION BY JERRY KRESY,* CONSUMER CO-OP OF BERKELEY

"* * * First of all, you do know that the consumer pays all the bills * * * whether you're wealthy or whether you're poor * * * whether it goes into University grants, taxes, welfare, tax write-offs—for all of this, the consumer pays the bills. If they don't pay for it in the marketplace, they pay for it in the second way. I'll give you a classic example: take the spray can, made of metal, you can't use the damn thing—all you can do is put it on the shelf. You're going to pay that price too. You also pay much of the agricultural prices, and you also pay for smog, air or water pollution * * * Cheapness is not the value; much of the time we think how can we get it cheaper * * * We pay the secondary prices, the prices that ecology groups have to try to go around and clean up—plastic and cans and glass and so forth * * *"

Mr. Kresy explained that the idea that large supermarkets are the most efficient ways to distribute food is not true. "Many people who work in food conspiracies know that you can get food much cheaper than in any supermarket."

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* Mr. Kresy represents the Consumer Co-op of Berkeley, an alternative marketing enterprise of supermarkets, service stations, garages, organic food stores; he is particularly instrumental in working with member participation, member control, and member education.

He went on to say that the consumers in the Bay Area have advantages over people in Sacramento or Modesto. "You're subsidizing us; you're paying more for the same products than we're paying in the Bay Area, and this doesn't involve the price differential or that the crop may be closer to you. You're subsidizing us because at this time, Lucksafe is in the process of attempting to squeeze out of the marketing business the small independent chains and independent grocery stores. The way they're doing it is a differential pricing structure * * * Safeway has different prices in different areas for the same product."

"* * * Differential pricing is a way to make it impossible for marketing co-ops to have a marketing situation where you're going to have a fair deal." Mr. Kresy explained that even a large co-op like that in Berkeley cannot compete with Safeway because Safeway is big enough that they can maintain low prices in the Bay Area and make up for it in other areas.

"* * * Food conspiracies * * * aren't changing agribusiness; it isn't changing the political structure; what it is essentially saying is, 'I can do better for myself if you and I work together.' You get into buying clubs, and the same kinds of things are in operation. But if you get into urban co-ops, you can begin to educate people * * * you can take a little piece of the dollar * * * and use it for educational purposes or maybe even for legislation. You can support other co-ops and farm groups (Berkeley co-op uses only UFW lettuce) * * * You can do this stuff if you're big enough; it doesn't matter what you do if you are small. In the beginning you have to be small to learn and grow, but if your goal is to take care of yourself * * * that's all you'll take care of."

SUMMARY OF PRESENTATION BY SHELDON GREENE,* CENTER FOR RURAL STUDIES

Mr. Greene began his presentation by describing the enormity of the task involved in attempting to change an institution like the University of California. He then talked about some of the "predicaments" in rural America for which the University can be held responsible.

"* * * the University has been very successful in encouraging productivity in agriculture * * * this productivity has had a technological and research component which has led to capital intensivity versus labor intensivity in California, and to a great extent, American agriculture. The impact of this, combined with other forces—government policies, tax policies—have led to the loss of family farming. To jump over California * * * to New Jersey, which is known in the East as the Garden State, which supplies this great urban megalopolis with a lot of its vegetables * * * in the 20 years between 1950 and 1970, New Jersey has lost 2/3 of its family farmers, and 1/3 of its farm land due to a variety of factors. This, despite the emphasis on productivity and capital intensivity or perhaps as a result of these factors, which are, to a large extent, the output of this and similar land grant institutions. The alternative to the productivity is that we've suffered as consumers from the poor quality of merchandise provided from the greater emphasis on the appearance of it, rather than the nutritional value of it. And we've also sustained an ironic, but inevitable, increase in cost for this food which has less quality, much of the cost attributable to the secondary questions of distribution of merchandising * * *

"* * * the attrition of the family farmer and with that noncomitant attrition of independent businessmen in the small communities who have had this symbolic relationship with the family farmers in the outlying regions, and along with this, the loss of the farm worker's mean income—his miserable income because he's been displaced by the farm machinery and the lack of an alternative in the rural economy for him * * * and with this has come a concentration of ownership of land in rural America * * * by absentee conglomerates. And along with this concentration has been tax loss farming and ownership of land by any number of syndicates that are non-agriculturally based * * * and along with this has come the concept of vertical integration of corporations which are not only farming, but doing the marketing, with the monopolistic considerations, the concentration of the market in the hands of the few, the inevitable increase in price which comes with oligopoly and monopoly. And with that has come environmental degradation * * * the depletion of single resources, the degradation of the soil, the exhaustion of it with nitrates, pesticides and water as well. And for all of this, a continual poor return on the invest of the farmer, the farmer's capital investment, so his benefit by and large has not been commensurate with the increase in productivity. He's driven to have a larger and larger farm to make a decent return for himself because he needs more acreage and more production * * * And finally, the bureaucratization of marketing, extensive controls on how you package, the appearance of things, just make it harder for the small man * * *

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* Sheldon Greene is the founder of the Center for Rural Studies in San Francisco and one of the directors of the National Coalition for Land Reform.

"What can we do? Several of us in this room had a series of meetings and developed some fairly detailed recommendations, which one day * * * we'll present to the Board of Regents and inevitably to the legislature. * * * We do need to make the University accountable for its research to the same extent that any new plant today has got to account to the public * * * to show that it is in the public interest and will not harm the public before it can be built. We also need to have the University consider the secondary considerations, secondary attributes of research and to weight those costs, social and economic costs, before engaging in research. * * * Certainly, we have to make the University concentrate much more than a token response on elevating that segment of the rural society which has been so abused by the productivity emphasis of the past several decades—that, of course, is the family farmer, the farm worker, other people who are dependent on the farm economy in the rural areas, including the urban consumer.

"* * * Perhaps viewing our relationship to the University in a vacuum is somewhat quixotic, because really, the lesson of the University's orientation toward the agribusiness interests * * * reflects that there's much more than just our common interest, our common concern, our formulation of intelligent recommendations that's at stake * * * Obviously, what's needed is one or more vehicles of political power which is based upon a broad popular coalition * * * of people who can get together and recognize that their common needs are in a certain vein and articulate these in a concrete way, and then structure an organization in such a way that they can make their interests known to the existing political leaders, and to new people that they might elect, who are as beholden to that constituency as many of the other political leaders are beholden to our adversaries today. The idea with which we should all probably go away from this conference is the importance of political power if there's to be any meaningful change in the present power relationships in rural California and rural America. And this requires an economic base, not just an organizational base * * * Obviously the economic base that agribusiness has legitimizes their claims with the University, with the politicians, and also gives them the money, the tax contributions to say, 'we have a right to special legislation, or legislation which reflects our interests to the exclusion of other people. * * *' "

WORKSHOP ON ALTERNATIVES TO THE AGRIBUSINESS METHOD OF FARMING

(By Henry Esbenshade)

The workshop began with a discussion on the methods of organic agriculture. It was pointed out that agribusiness owned the best lands, while only the less minerally rich soils were available to the small farmers. This led to the question of soil nutrition, crop rotations, and green manures plus composting. There was doubt expressed over the feasibility of the process of changing a farm from chemical to organic. There is much back yard experience with gardens, but very little is known about the larger operations.

Wendell Lundberg of the National Farmers Organization and an organic rice farmer, spoke of his 3,000-acre farm, and how little support he was given in dealing with crop problems by the University. The concensus of all present was that UC Extension has little conception of what organic farmers are doing. Mr. Lundberg's farm is successful and points optimistically to the feasibility of such farming, but he is well aware of the problems which other farmers around him are facing. He feels strongly that the public is not hearing the voice of the real farmer today, and only through a cooperative effort can needed information be made available.

Bernard Bricmont of California Certified Organic Farmers supported this discussion with accounts of farmers whom he is certifying. Many questions were raised concerning this process of certification, and it was pointed out that the UC system surely must be able to assist in the determination of the factors which influence the organic content of soils. Farmers want to learn what they can from those who have the research facilities.

Discussion moved into the tax question as somebody brought out the questionable economics of the small farming operations in the state. In response, Dr. Paul S. Taylor, Professor of Economics at UC Berkeley, discussed the reforms of the New Deal, reforms which the people did not support, and as a result, failed. The "machinery" closed down due to lack of knowledge in the community. "It is proper to speak of the responsibility of UC, but also the role of the people must be considered."

David Talamante of El Rancho del Sol spoke of his efforts to organize the small farmers, and the establishment of a farm worker's lobby in Washington with hopes for the establishment of a bank for loans to small farming operations. Others actively joined in the discussion of how to go about organizing political action, with the conclusion being that an organization was certainly needed to take into account the wide variety of problems all of them faced. It was suggested that a series of similar conferences of farmers be held to organize and define in detail the problem areas which could be dealt with. A long discussion ensued on the strategies of power, the history of reforms (for the people or for the government?). Who can we go to in the UC system to research a problem? An alternative to agri-business is power. Small farming is poor business today.

In the course of this discussion, Dr. John Hadison of the Department of Environmental Horticulture spoke of a friend in the Midwest who organized a number of his neighbors and their friends to actively pursue lowering their production costs by implementing organic principles, technological exchanges, and cooperation. He pointed out that four calories of fossil fuels are needed to produce one calorie of food, which is hardly efficient in comparison to the work undertaken in implementing other forms of energy in the production of organic foods. Deficiency should not be monetary, but instead, measured by the people producing on the land. It can be done most efficiently if we begin to use our resources.

Mr. Bricmont spoke of the urgency in marketing foods directly from the farmer, thus eliminating the middleman (brokers, etc.), who cater to the large supermarkets, finding loopholes and getting around the marketing organizations in power. The University must understand the parameters of the problem—an analysis of the system and an alternative direction for the small farmers was called for. There was interest in the alternative marketing system currently in operation in Europe called Demeter, which is the arm of the Bio-Dynamic farming system in those countries. The work of Dr. Pfeiffer in this field was mentioned along with names of other Europeans who had spent many years in the early part of this century attempting to deal with the approaching chemical revolution.

Mr. Lundberg spoke of the catfish he raised, and how they were sold to the public with no inspection of their toxicity, irrespective of the chemicals which could have been applied to regions surrounding the ponds, or the actual nutrients consumed by these fish. The overall reaction was a demand for greater research into the meaning of quality foods versus the chemically fertilized production orientation today—the health of the people and of the soils which produce for them. There must be a medium of communication between such farmers who are truly concerned with these problems, but who do not fit into the backyard Rodale Organic Gardening programs as they exist at present. Once again, the need for research into farming organically was emphasized.

Dr. Robert van den Bosch of the Division of Biological Control, UC Berkeley, spoke of the work of the Biological Control laboratories in Albany. Although he did not feel that this work directly benefited small farmers or organic farmers, he did feel that they could utilize the resources by organizing and presenting inputs for research into the problems which faced them. Dr. van den Bosch mentioned that the funds for the work of the laboratories are severely limited by the State, and also by the large cotton and alfalfa lobby groups who have the capital to support research for their interest groups. Much work has been done, and he saw no reason why integrated control systems could not be worked out for a wide variety of crops. Once again the question of organizing small farmers and organic people to lobby for their interests in UC research came up. The big growers of alfalfa, cotton and deciduous fruit have been very active in supporting this research. Dr. van den Bosch did not believe that they were importing totally new ideas in farming, but that their principle concern was to maximize the benefits of the inputs which the farmer could supply in terms of his soil management and such other inter-related factors. He estimates that integrated control would reduce by 75% the pesticide costs in cotton, and he held similar predictions for alfafa and deciduous fruits, including citrus—which all means savings to the farmer and consumer. Yet communication of this knowledge to the farmers was exceptionally difficult due to the harassment of fund cut-backs, and the great domination of agribusiness pesticide salesmen who cost the public some $25 million a year to advertise their products. He supported the work of the certified organic farming movement, and felt that it was a step towards a greater understanding of the parameters of problems today. "Perhaps we can one day reach this pesticide free environment ideal which they profess . . . perhaps an insurance program against pesticides or subsidies for non-chemical usage." He did not feel that reduction in our pesticide use would cut back the food production as drastically as some Farm Bureau members think.

It was the concensus of the members of the workship that there is a great need for cooperation to provide inputs into this area of research, especially the economics of such an alternative to chemical agriculture, and the need to integrate competent people within the University to efficiently use the resources which are available for research. UC could provide services which the public needs, but the information is not getting out.

Again, members of the workship voiced their interest in the formation of a political lobby, as farm advisors were not adequately sharing the knowledge of the University with the public. Only through pressure could El Rancho del Sol succeed in getting a farm advisor to assist them. It was felt that the UC farm advisors were unable to deal with the diversity of problems confronting the group, and for that reason, several private groups have begun consultation—Biccau Vitova Insectaries and the Association of Applied Insect Ecologistics were cited. Dr. van den Bosch felt that any other groups had better be checked through his offices before they could be trusted in pest control. Organic farming is considered a challenge to the establishment, as a threat to free enterprise and a conspiracy of the eco-freaks against the vested interests of chemical industries which allow for the safe production of foods in California.

So ended the workshop. Small farmers, organic farmers, farm worker co-ops, and a big rice grower shared similar concerns that this issue of the research responsibilities of the UC system be defined and directed to support their interests in survival. It is a good beginning.

WORKSHOP ON ALTERNATIVE TECHNOLOGIES

(By Jon Hammond)

The first topic of discussion in this workshop was methane production. Cliff Humphrey of the Ecology Action Educational Institute said that urban methane generation could help supply the needs of counties presently on a gas ration. While all public works projects are in jeopardy, at the same time, tons of leaves that could be converted into methane are being buried. The replacement of gas with methane will not come overnight. Because digested sludge must be dried before it is put back on the land, it was suggested that composting might be a better method of producing a soil conditioner.

In regard to energy conservation, the following question arose: Which has the most effect on soil structure, (1) using organic matter on the soil to feed soil organisms to restructure the soil, or (2) using organic matter for methane production to fuel tractors to turn the soil? As no one present knew the answer, Cliff Humphrey felt it was the type of research the College of Agriculture should direct its attention to. This is especially important in view of the present energy crisis.

Professor Robert van den Bosch of the Division of Biological Control, UC Berkeley, stated: "We should begin building a backlog of techniques that do not require energy inputs if the species is to survive. The government should support the research of organic gardeners instead of working solely on how to grow a more efficient rutabaga."

The next topic of discussion was solar energy. Jon Hammond of the Department of Environmental Horticulture observed that it is ironic that peak energy use comes during the summer even though we have very cool nights. Unfortunately, our style of arctitecture is not suited to this climate. People are so accustomed to air conditioning that they don't even close their drapes when the sun is shining in the window. Many people have lost contact with the realities of the environment that surrounds them.

Somebody asked whether solar energy can be used for cooling systems in the summer. According to Pran Vohra, there have been several attempts to do this, including one utilizing salts that melt when warmed, and then release the heat when they recrystalize.

Another system concerns storing heat. Jon Hammond told of staying in a house in New Mexico that used 55-gallon drums full of water to store heat. The south wall of the house was made of glass with a movable panel for insulation outside. Inside, the wall was lined with barrels of water. During the day, the panel was lifted to allow the sun to heat the barrels, and at night, the panel was pulled over the glass wall to protect the heat from re-radiating outward. This system can work in reverse during the summer.

The third topic of discussion concerned the use of insurance to supplant pesticides. According to Dr. van den Bosch, only about 15% of the crops are threatened by insects. If we insure the farmer for the full value of his crop against loss to insects, the farmer won't have to spray since spraying is only a form of insurance anyway. This approach can both save the farmer money and protect the environment. However, it is difficult to get the farm advisors to accept new ideas such as this. There is also a big problem with pesticide salesmen convincing the farm advisors to use unnecessary pesticides.

Discussion moved toward the University, and it was agreed that the University must modify the direction of its research to meet the new demands placed on it by society. Victor P. Osterli, Program Leader, Agricultural Extension Service, stated that the College is changing and attacking environmental problems. For example, they are working with the California Department of Water Resources to develop a comprehensive state-wide water plan.

Jim Vlamis of the Department of Soils and Plant Nutrition, UC Berkeley, explained that the University originally started out fulfilling the mandate of the Morrill Act to "serve the people." In the 1860's, one-half of the population consisted of small farmers. The University began changing after World War II when the incorporation of California farming started accelerating, and agriculture was shifting in the direction of agribusiness. Big farms gave money for research; the small farmers did not.

But now, other segments of the population are developing their own power. An example of the coming change is some new courses being given—one is called "Urban Garden Ecosystems." It is at the opposite end from agribusiness. The students are interested in it in terms of getting out of the rat race and they get an integrated way of doing things—growing their own food without chemicals, etc.

It may be that as we enter a period of enery scarcity, the small farmers may be able to produce cheaper food. The pesticide and energy crises seem to go against the corporate farmers.

WORKSHOP ON PATHS OUT OF POVERTY

(By Geoff Allen)

The members of this workshop were mostly from universities and public agencies. They were therefore well placed to determine what actions the University could realistically undertake. Conspicuously absent were the farm workers. However, the workshop members had heard the letter from Jim Horgan, Research Director for the United Farm Workers, which eloquently expressed that group's position, and much of the workshop discussion developed from the main points in that letter.

This workshop, then, concentrated on the most significant identifiable group—farm workers—while recognizing that there were also other neglected rural groups; e.g., small farmers. We concentrated on the most visible part of the problem—technology—especially the impact of mechanization.

Discussion led the group to the position that we must accept the fact that we live in a technologically based society, that the clock cannot be put back, and that technical changes, although controllable, will continue to occur whatever action the University does or does not take. Most of the changes we regard as 'progress' have come about through research in industry, rather than in the University, and this situation will likely continue. However, some discussants felt that much more control of both the rate and direction of technical change than presently exists was possible and desirable.

Taking a historical perspective, the group believed that 50 to 75 years ago, the Agricultural Experiment Station was fulfilling the role anticipated by the sponsors of the Hatch Act: it was providing services to most of the people, since the rural population comprised a large part of the total.

What was realized by the workshop participants was that the claim of impartiality in University research is a myth, but a myth still believed by many researchers, and one which needs to be demolished if a redirection of the work of the Agricultural Experiment Station is to occur.

The group concluded that the rate and direction of technological progress was relatively immune from the actions of the University, but that as a publicly supported institution, the University did not appear to be meeting its responsibilities of serving all the people. Such responsibility requires resolving conflicts between the needs of conflicting groups and establishing what constitutes desirable distributions of wealth between these groups--both difficult judgmental problems.

Accepting that technical change will result in continual displacement of workers with low productivity, the workshop moved to the next problem: what to do for the half million people in California who will not be needed on the agricultural work force—most of them farm workers (rather than small farmers). Under present conditions, they must either migrate out of the countryside often merely transporting the problem, or exist on welfare.

This problem was discussed in two parts:

1. How can the University aid the workers left behind in agriculture?
2. How can the University help the people being pushed out?

Aid for workers left behind. For farm workers to be successful in their fight for increased wages and other benefits, they need to organize. This was forcefully stated and readily recognized. Workers need both economic and political power. What the University has is knowledge, which can be used to create principally political power.

One question was—how much can the University assist in unionization since this is not considered a typical University activity? However, to the surprise of many, it was pointed out that we have a model from an earlier period—the University's role in setting up the Farm Bureaus. These were designed to organize farmers into groups so that the University could communicate with them. There seems to be no reason why the University should not communicate with and serve farm worker groups.

Some discussion developed on the possibilities for a stable work force. On a given farm, this would require designing a mix of crops and techniques which would require the same amount of labor throughout the year. As a longer term solution to the problems of migration and seasonal labor requirements, it appeared ideal. Clearly it is a neglected area of research. And at present there is no incentive for a grower to adopt such a scheme aside from the desirability to have a regular group of workers to turn to. Legislation would be needed to create variable taxes or wage rates dependent on whether the employment period was by the day, week, month, or year.

At this point, we asked whether the existing agricultural extension service could be modified to serve both workers and growers. It was recognized that the extension service had done well in reaching a particular segment of agriculture, and that the thinking of extension agents was currently geared along these lines. To ask these agents to serve farm workers would be asking them to serve groups with conflicting interests, and the workshop felt that the only solution would be to set up a parallel arm of the extension service. On the other hand, there seemed to be no great problem in getting extension agents to serve cooperatives of former farm workers (discussed below). These were not seen to be in conflict with other growers.

Help for people being pushed out. Unionization can also assist workers being displaced, although this specific topic was not considered. There was some discussion on whether unionization promotes mechanization or vice versa, with the general opinion being that mechanization was occurring and unionization was a reaction to it.

One route for displaced workers has been the cooperative or communes. La Cooperativa Campesina was cited as an example. Those in the group familiar with this concept regarded it as a short term approach. At present, it appears to be the only answer to lack of planning for redevelopment at the national or regional levels. We heard of the approach of several European countries towards planning on a national scale so that new factory locations would be in areas of local unemployment.

The workshop participants concluded that the single most effective action the University could take was what is termed a "social impact statement." Thus, in the same way that companies are required to file environmental impact statements before they undertake any new building, workers in the agricultural experiment starion would be required to file a social impact statement before they started a new research project. It was not thought that these would be any more accurate than environmental impact statements. However, by specifying which groups of people must be considered and what possible outcomes must be evaluated, the requirement of a social impact statement would exert considerable influences on the thinking of all of the researchers in the agricultural experiment station. And that is the only way in which it will change.

WORKSHOP ON ALTERNATIVE MARKETS AND CONSUMER NEEDS

(By Marshall Hunt)

To the benefit of this workshop, there were representatives of all sides of the question who approached the sessions with a healthy combination of a desire to cooperate with others to explore new areas of activity, while at the same time keeping in mind for themselves and the group what the needs of their respective groups are.

The most important outgrowth of this workshop was the idea of an Office of Alternative Markets Information. The seed from which the idea grew was the information from Floyd Allen of California Certified Organic Farmers regarding a similar office which was set in Pennsylvania. Howard Schultz's (Department of Consumer Sciences) description of the University's problem with the communication of the wealth of information that currently exists in the UC system made the discussion substantive in nature.

Given the present situation that people who have been outside the University's mainstream of research do not have the contacts necessary to get the information that they need and is available, and given the fact that for a variety of reasons (for example, the fact that professors do not get credit in the review process for publications in the Extension Bulletin) that information of a problem-solving nature is not published, the charge of the newly created Office of Information would be to gather from the sources at hand the information requested by individuals. This would require a stable budget to hire a director, clerks, liaison people, and persons who could communicate with academicians, farmers, consumers, etc. It would be appropriate that the Office be funded by the University through its Cooperative Extension Service so long as it does not become captive to the present special interest grower groups or the interests of agribusiness.

There was some disagreement about the Office's position with respect to redirecting University research. Roger Hillyard of The Uald, an alternative marketing concern, expressed concern that research would be used as an excuse for non-action. Marshall Hunt of the Davis Environmental Council held that the Office by reason of its intimate contact with a new constituency would be in an excellent position to know what research was needed and thus should be in the position to act, not just advise and recommend to some higher authority. After more discussion, it was noted that the apparent disagreement was one of timing, and it was agreed that for the first two years, the Office's major task would be coordinating the existing information.

The conference program listed five topics of interest in the Alternative Markets area. The facilitator surveyed those in attendance and the topic markets for non-agribusiness produce was one which drew the most response. It was recognized that a thorough discussion of this topic would necessarily lead the group into the other topics listed. The definition of agribusiness' was debated with the concensus being that size alone did not mean anything, but rather it is whether or not the farming operation itself is owned by those other than the farmer or farmers themselves. This definition was not held to be complete, but rather it settled the issue that the size of the operation is not as important as who owns and operates it. It was a matter of emphasis that a good deal of the concern of the group was about the small producer who must sell everything he produces at the best price in order to survive.

Roger Hillyard brought up a case where a grower could have used the assistance of the Extension Service in learning how to grow a crop organically. Floyd Allen of California Certified Organic Farmers was very interested in the problems of small organic farmers with packaging, so that the crop will be accepted on the market and sell at a healthy rate. The problem of the small guy knowing what the consumer prefers at a particular moment in time is an area of research the University could pursue. There are various systems viable and in development for packaging and preserving produce as it is picked, but their scale is always that which only the huge agribusiness operations can afford.

A hot issue that came up throughout the day was that of legalized waste and order shortages of produce by the various crop allotment boards and agricultural codes. Later, it became apparent that one of the areas of concern of the proposed Office would have to be the interpretation and revision as necessary of the complex and confusing agricultural codes. Those of the group with experience in these matters thought that if the people of the state only knew what was happening, they would push for change because it is the consumer, as always, who pays for this unnecessary waste of good food. It was noted that the present confusion works to give those who could afford an attorney a big advantage. Also the packing, canning and processing companies sometimes use their interpretation of the codes to the detriment of the farmer who is delivering his goods. Just before the lunch break, there was a general feeling that if possible, someone from the law school should be at the meeting. This possibility was checked out but without success.

The concept that the more direct the path food took on its ways to the consumer was explored from the ground up. The problems of road side stands, mail orders, and farmers' markets were discussed. Steve Busch of the Owens Valley Indian Co-op felt that there was room here for real improvement, while Jerry Kresy of the Consumer Co-op of Berkeley wanted to deal with issues that would affect the broad masses of consumers. It was agreed that the proposed Office of Information would serve in this area to help farmers to find a number of market outlets so that they could maximize their returns, and so that the consumer would benefit from fresher foods that could be cheaper if waste was stopped.

This discussion of marketing lead to the realization that while the giants can afford to do extensive research into consumer preferences and work to streamline marketing to their advantage, the smaller guys do not have this information, and thus are at a competitive disadvantage. It was thought that the University and the Information Office could aid in closing this unfair competitive gap. The education of consumers about the crop seasons, the unnecessary waste, and ways that they could increase the power of their dollar could be done by the University and would help the smaller operators.

The sessions closed with the participants cautiously hopeful. It was recognized that everyone stood to gain by cooperation, so as to in effect, vertically integrate the food supply process to the benefit of the consumer, and not to the increase of profit for some giant agribusiness corporation as is now done.

WORKSHOP ON THE ECONOMIC ASPECTS OF FARMING

(By Bill Kopper)

At the beginning of the workshop, W. C. Davis of the Department of Anthropology commented that it was necessary to identify the factors which contributed to the decision about what research should be conducted and on what level it should be funded. Bill Kopper of the Small Farm Project (UCD) pointed out that this was one of the functions of the social implications of research project being conducted by Isao Fujimoto et al. David Hansen of the Department of Agricultural Economics and other members of the workshop agreed that most research in the past had been oriented toward production agriculture, and that funds were made available for this type of research while socially oriented research was discouraged. The groups expressed the need for a summary of the independent research being done by faculty on rural problems, and for further research in the area. Sheldon Greene of the Center for Rural Studies cited an example of this type of research—the study completed by a group of land grant colleges in the Midwest on the impact of farm size on rural life. Although Mr. Greene could not remember the reference, he felt that the recommendations in this document were excellent.

Mr. Greene continued to say that the Davis campus was the preeminent agricultural school in the country, and of all popularly based schools, this school be the first to look into what is going on in rural America. Instead, nothing has happened in Davis, and all of the concern for these problems has been developing in the Midwest. "If anything, this school has attempted to hush up the problems of rural America, just as the whole state has attempted to ignore rural and environmental problems until very recently. If anybody got in the way of the march toward more mechanized, more efficient, more exploitative farms, they just got silenced." Goldschmidt was silenced after publishing his 1947 study of Arvin and Pinuba which demonstrated the delapidation of communities surrounded by large farms, opposed to those surrounded by small farms. Professor Budd was cited as another example of a controversial viewpoint being suppressed. Professor Budd published a book about the dangers of pesticides several years prior to Rachel Carson's *Silent Spring*. He could not get it published anywhere in California, and finally found the University of Wisconsin based in Madison willing to print his work. After the publication of his book, he was bitterly attacked and did not receive the promotions that were due to him. Mr. Green concluded that this was an example of what happened to faculty members in the University who took controversial positions.

Stephanie Fincetl of the Davis Co-op raised the question of the effectiveness of the different studies conducted by Goldschmidt and other scholars. She wondered if these studies ever have any application or whether they are just filed away on a shelf or in a journal that no one ever reads. Mr. Greene pointed out that studies such as Goldschmidt's work or information on consumer items and environmental problems is enormously useful to consumer organizations or public interest law firms who are pressing for certain type of legislation or change in society. Most of these groups do not have the funding to conduct the research on their own and are forced to rely on the work done by universities or similar institutions. In addition to these comments, W. G. Davis pointed out that there needs to be a re-thinking of the research programs that most of the faculty are doing, and he added that it was always a problem to get new research or new types of research going and to secure the money for the research. Mr. Davis felt that it was a tragedy that there was no money to do research on Rural America, but this country has money for similar research on Ethiopia. He stated. We know more about Rural Ethiopia than about Rural America. He suggested that we define the constituency for rural research in this country and find out what type of work is necessary.

Chuck Irby of Black Studies cautioned the group not to overestimate the power of the University. He pointed out that a great deal of research can be done with no money or little money. Citing Yolo County as an example, he said that much research has been done in Yolo County by a number of different groups around the University. None of this work has been synthesized and very little of it is used for any purpose. Mr. Irby suggested that we get together all the people on campus who have done research on Yolo County and lay it out. By viewing the cumulative data on the County, it might be possible to see patterns and formulate worthwhile rural programs. He added that most of the research on Yolo County had been done very cheaply by students and staff. Bill Kopper cited the Small Farm Project at UCD as an example of the "inexpensive" research that has been done in the County.

Midway through the afternoon, the discussion began to focus on the Extension Service and the various segments of the public which it serves. Bill Kopper related his impression on how the Extension Service agents have a different type of life than they had in the past. It might be considered a softer life in the respect that the agents make fewer farm calls than they did in the past. The average Extension Service agent is now a specialist who spends half of his time doing research; he has little experience with actual farm management practices. It is difficult to assess whether he is being listened to more or less than in the past. Sheldon Greene pointed out that farm workers cannot get information at all from the Extension Service. He claimed that the organization had evolved to the point where it served the economic interests of the large farmers and corporate farmers. It was another example of the subsidies that the taxpayers provide to the large growers.

The discussion on the role of the Extension Service agent emanated a number of recommendations on the changes which should be made in the agency itself and associated agencies:

1. Provide economic advice to farm workers about their taxes and how much they should get paid for certain types of work. This information could be transmitted through the children from special instruction programs.

2. Extension service should assist farm workers and small farmers in developing co-ops which would allow for greater economic stability of the individuals involved.

3. The Extension Service should emphasize farm management and should develop cost information and other types of information which is of maximum utility to the small grower.

4. Through the 4-H and other educational programs, the Extension Service should develop programs which assist farm worker children and emphasize the advantages of rural living.

There was general criticism of the information from the Extension Service, which only emphasized increased production and nothing of the social aspects of rural living. In addition, it was felt that most of the techniques suggested would only help farmers already large enough to obtain large capital loans.

Much of the discussion of the afternoon session centered on the role of the University and how it creates attitudes in its students and the public. It was felt that the University should take the position that it is dedicated to keeping people on the farm and it should outline a policy to achieve this. Several approaches were suggested to achieve this end. One was to gear the curriculum, research projects and papers to concentrate on the amenities of rural life. Another approach was to start a rural information office which would provide people with information about rural living and how to solve certain farm problems and farm worker problems. Bill Kopper suggested that perhaps one way to increase the University's responsiveness to these problems would be to start a student chapter of the National Coalition for Land Reform, and ask the University to provide the funding. Sheldon Greene and Joe Plagenza of the Western Dairymen's Association commented that the professors were going to have to put their heads on the block. Currently, professors don't even come out of their turtle shells because they have seen too many of their members have their heads cut off with no one coming to their defense.

Presently, the University is not even suggesting that living on the land is a good idea—it will encourage the subsidy of 3,000-acre developments, but will not subsidize ten acres. Chuck Irby commented that he would be willing to give up the urban amenities for a chance to live on the land and farm. But he stated that this opportunity was not even open to him because of the large capitalization necessary to get into farming. This discussion led to an exchange on the philosophy of urban versus rural life. It was pointed out that the University only stresses an urban ethic and there are no positive features attached to a rural life style in any of the University's courses or research. Most of the workshop members agreed that there is a need for the University to begin discussing the advantages of a rural life style and at least give it some status within the University's catalogue of biases.

Comment From Magnar Ronning, Associate Dean, College of Agricultural and Environmental Sciences

It has been a real pleasure for me to participate in the conference today, but I do feel that to pose as an official of the "University as indicated on the program may be somewhat presumptuous on report. As indicated on the program Dean Nielsen was to have appeared but a conflict developed in his schedule in that he needed to attend an important meeting of the committee of consultants dealing with soil and water quality. With your permission, I will make my comments as a faculty member of the University with some experience in administrative matters gained while serving for five years as Chairman of the Department of Animal Science. The comments I will make will be without much preparation and will largely be in response to some of the discussions and comments that I have heard during the conference today.

The University of California is many things to many people, and to any one individual probably is largely related to one's personal experience and contact with the institution. We can all agree, I am sure, that it is large, and like all big things, it becomes susceptible to unresponsiveness—something like a kick in the tail of a dinosaur may involve some delay before there is a response while the message is being conveyed to its brain. Therefore, an individual faculty member, like myself, with whom the public frequently communicates—being but a small cog in a huge piece of machinery—may not be able to elicit a University response as quickly as might be desired. The University also is costly as is immediately clear when one views the overall budget which is public information. The concept that some may have, however, that the University is the source of unlimited resources is a myth at the individual faculty member's level. I feel, therefore, that Mr. Lundgren in his comments made a very telling point when he referred to grants which support research; the source of funds might indeed be a force which could influence the kinds of things which are done. Let me use my own experience in the Department of Animal Science as an example.

Activities in the Department of Animal Science are in reality animal biology directed at food production and land use. Resource allocations for normal state and federal public funds are largely used up in fixed and overhead expense, such as salaries and facilities support, with very little spendable operational monies. Therefore, it is necessary to seek extramural funds for the majority of research activities. In seeking and accepting extramural support, both as individuals and as a department, we have firm guidelines that such support must be without strings attached, such that scientifically sound research in animal biology and production principles can be pursued. Surely other individual investigators and units in the University have similar guidelines; therefore, I wonder to what extent in fact the so-called agribusiness influences research activities at the University. In the Department of Animal Science, with which I have been associated, we have had little experience with agribusiness support. Rather, most of our extramural support has been from institutions such as the National Institutes of Health, which because they are medically and health-oriented in their objectives, may have involved some prostitution, but hopefully in a benevolent manner in the interest of pursuing animal biology studies. I think there is evidence for this in the fact that as the resources of the National Institutes of Health have become more restricted their granting of research support has also become more restrictive toward more specific health-related subjects or very basic animal biology pursuits, fundamental to the solution of medical and health problems.

I heard two other comments during the day which are significant in this respect. As animal scientists, we perceive that animal agriculture is an integral part of land use, especially as applies to some thirty million acres of marginal land in California commands high priority. We have had difficulty in finding support for that type of research. I was interested therefore in Sheldon Greene's comments when he suggested that there are many sources of federal monies available for those kinds of activities. Certainly as an individual investigator, and as a department chairman, we need all kinds of help to identify and to access such sources of funds. The other comment that I thought was significant was that of Dave Talamante when he suggested that people with common interests need to form associations which have as an objective activities to help mount support for that which needs to be done.

Mr. Humphrey's statement, "society's vested interest in its own destruction," brought to mind some problems of society which for a trained and practicing biological scientist, are a source of a great deal of frustration because it is difficult to see how within our biological discipline we can contribute to solutions. With your indulgence, I will divest myself of a couple of these frustrations by way of example. I have worked with small diary farmers, especially in Oklahoma, and with substantial success in improving the efficiency of their operations. Later, it was frustrating to them as well as to me when their businesses folded being caught in an economic squeeze which neither of us felt we had contributed to. Another frustration relates to Mr. Briemont's reference to packaging which frequently places more emphasis on appearance than on quality. It has been frustrating to me to have been involved in the development of techniques for the production of high quality nutritious meat, then to find it won't enter the market competitively because consumers seem to prefer to select some beautifully packaged pre-cooked ready-to-serve convenience product which per unit of nutrition may be twice the price of the fresh meat. I agree with Mr. Kresy's statement that it is that way, that it is their choice. I am pleased in this respect that in the College of Agricultural and Environmental Sciences there is concern for effective consumer education; there are activities in this area, and there is a major effort being made to strengthen and increase activities in consumer education and research.

Most of the problems I have heard discussed today can be solved early through entrepreneurship and/or community action. The University's role is in contributing necessary information through its residential and extension teaching programs and developing new information as needed through research. In this respect, I was very interested in Dave Talamante's discussion of the El Rancho del Sol project. I was disturbed, of course, to hear of the hassle involved in getting the attention of the Agricultural Extension Service; however, I was encouraged to hear that Dave and his group approached Extension and hung in vigorously until they got the attention, and gratified to hear that they now are getting service from Extension.

Agricultural Extension representatives will comment on their activities later. I wish to mention briefly instruction in the College. I am pleased to report that in recent years, there have been some significant changes in the College teaching program, to open them up to broader participation by all students on campus and to direct attention to public relevancy. More emphasis has been directed to social and behavioral matters, even in technical areas, such as Animal Science, Plant Science, and Soil and Water Science, course offerings have been introduced to offer students a broad view of resource utilization and management, and accompanying environmental and social implications. I have been pleased personally to see in my own class, Domestic Animals and Man, increasing numbers of students not majoring in Animal Science, but in Economics, Political Sciences, Social Sciences, etc. This expanded contact pleases me for the increased probability of enlightenment of future policy matters with respect to problems of resource management in food production and distribution processes.

Toward improvement of the processes by which the University can contribute to the solution of problems such as have been discussed today, I believe the major area to be strengthened is communication. For example, to stop the machine, I feel cannot be an acceptable solution. When man shaped his first stone tool and found that this gave him an advantage in coping with his environment, I believe he became irreversibly committed to technological development. In my personal experience, I look back to the beet harvester; I worked in the beet fields and topped beets with a machete-like instrument to which scars on my hands bear witness. I believe there are many people that join me in not wanting to return to that procedure for harvesting beets. An important factor at that time was that there were alternatives—some joined the army and others went off to the shipyards. I'm not suggesting that these were satisfactory alternatives, but they were alternatives nevertheless. I can't feel that machines have been developed for the ruthless displacement of workers from the fields. I know some of the engineers and they are good people. The major fault as I see it, however, is a lack of communication among the various scientists and scholars. The engineers were in their little cell developing machines and the biologists were over in their laboratories working on plants, sometimes in communication with the engineers in developing plants that were adapted for mechanical harvesting; and the sociologists were over in their little box doing their thing. What was lacking was total communication among all parties that would be concerned in the total problem involving the entire system, not only that portion as applied to production and harvesting.

Finally, I would like to comment on the reorganization activities within the College of Agricultural and Environmental Sciences, which I believe will go a long way toward improving communications among units within the institution and improving its responsiveness to the problems of society. This involves the appointment of associate deans with responsibilities in subject matter areas in which they are conversant. This should improve communications between the individual faculty member and scientist and the administration of the College. Secondly, through close communication amongst the associate deans, there will be a climate of more awareness on the part of every one of what is happening in various corners of the College. Finally, through the use of appropriate public advisory committees and conferences, such as the one we have participated in today, this should improve communications between the College and the public, and hence, permit us to be more responsive to the needs of more segments of the public.

I thank you very much for permitting me to participate in this conference. I have enjoyed it very much and I shall do my best to represent to other members of the College the issues which have been raised. Thank you.

COMMENTS FROM VICTOR P. OSTERLI, PROGRAM LEADER, SPECIAL PROJECTS, AGRICULTURAL EXTENSION SERVICE

Conferences such as this are helpful since they provide a forum for the exchange of ideas. Our purpose in attending was primarily to listen and to learn. Our impressions of the conference will be conveyed to appropriate administrative officers. Cooperative Extension is constantly reviewing and modifying its program to meet changing needs, and our programs are indeed people oriented. Some examples are as follows:

a. The Expanded Nutrition Education Program (ENEP) with its proven success is significantly contributing to improving the nutritional habits of the lower income groups.

b. The Community Resources Development (CRD) program has been expanded with the more recent addition of another Specialist.

c. Staff members are involved in many areas in providing better community services and facilities. An illustration of this was the recent completion after eight years of frustration, of the East Dos Palos water and sewer system. Specialists and Farm Advisors assist local Departments of Public Health by providing technical information on implications of various solid waste disposal.

d. County staff members have served on committees to assist in improving farm labor housing and in response to specific requests have provided assistance with maintenance programs and landscaping for self-help housing projects.

e. Environmental improvement programs are a part of several state specialist projects which support such efforts in nearly every county. This primarily involves providing technical assistance and developing informational materials.

f. A recent water policy conference served as a means of getting people and agencies of divergent views together to discuss mutual interests and concerns.

WHERE DO WE GO FROM HERE? CONCLUDING REMARKS BY ISAO FUJIMOTO, CONFERENCE COORDINATOR

It is customary to say after a gathering of this kind, that this is a good start and to offer certain optimistic appraisals. To a certain extent, we can do our share of this. It certainly does help to know that there are others who share similar concerns, and conferences are good for bringing people together, to recognize allies and to flesh out the names that existed as abstractions.

But if we are to acknowledge that it's a start, then we need to spell out what it is we're starting on, and in what direction we're going. It's clear from just this one day's gathering that many questions need answering, the very nature of these questions suggesting follow up action to take. Some questions are a matter of dealing with misinformation or lack of information that seminars, short discussions, or a little homework reading available brochures couldn't clear up, such as basic queries directed to the structure of the University of California, the Experiment Station and Extension Service. But there are other aspects concerning the resources, priorities and claims on the University system that may not be as clear. Neither is it clear who, how, where, and whether the kinds of questions raised by the various publics represented here today can be channeled into the University and challenge interested scientists, given the nature of rewards, and the social and political context of how any kind of work--including scientific research—is responded to, investigated, and disseminated.

We need only remind ourselves that with all the concerns expressed about ecology and the response of the University to broader environmental issues, it's only been about a decade ago that the ideas and writings of Rachel Carson, who did so much to spark the public conscience regarding the quality of life, were damned by scientists on this very campus as irresponsible and useless. This says a lot about the social and political context in which we work. When the chips fall, the curtain also falls on the myth of scientific objectivity, revealing instead the extent to which the influence of vested interest groups, such as the chemical and pesticide industries and petroleum backed foundations, has permeated the University system even more so than the scientific method.

The kinds of questions raised by people associated with groups meeting today—organic farmers, small family farms, farm workers, consumers, the cooperative movement, reflect areas which should legitimately challenge the University in as much as they are societal questions touching on areas that relate to the quality of life in general, and to the connections between rural and urban living as affected by social implications of the work done by agricultural scientists in particular. To be sure, there are differences in vantage points, assumption, priorities and definitions, but the over-riding concern is that the University cannot continue to allocate such a high proportion of its resources in the name of growth and efficiency, to tackle priorities for the benefit of limited audiences as those involved in production and corporate agriculture—without eventually reaping serious societal consequences.

This conference is not alone in expressing such concerns. If anything, these views are consistent with our being in the age of accountability. The investigative research of task forces or regulatory agencies, land ownership and pesticides, and specific analysis of land grant colleges such as *Hard Tomatoes, Hard Times, Failing the People* (study of Cornell), and *Dirt on California*—regardless of disclaimers by critics, call for the public institutions to be accountable to the larger public, than to be servants of selected groups, selected by nature of their manipulative advantages and concentrating of power and money.

With the recognition of such challenges and certain opportunities, some quick analysis of where we go on the basis of what we have heard from the conference sessions is in order. This is done especially with the idea of providing a charge to those of us who are part of the University to begin exploring ways to implement what we have deliberated.

Two possibilities will be mentioned now. For want of a better name, we can call one a People's Information and Family Farm Clearinghouse, and the other Ombudsman on Agriculture and Quality of Life.

The purpose of the clearinghouse would be to make the University resources more accessible to the kinds of publics identified here, and also to provide a bridge between such publics and existing offices. It is not meant to duplicate the efforts of Agricultural Extension or the Agricultural Information Service, but is suggested to make better known the resources of the University to those publics that may not have known what the University has to offer, or who may have dismissed the University as a resource, for a variety of political or negative image reasons. The clearinghouse can also serve as a bridge between various publics and faculty and staff, particularly those with expertise and interest in tackling and questions, such as those raised here at the conference.

As to the arrangement of such a clearinghouse, the answer will depend on the nature of the current outreach and the cooperation by the Extension offices. It may be possible that the Extension Service can accommodate what is suggested here, or it may be more feasible to set up a pilot office with a different public image that will be more conducive to bringing together the people and the University. It would help to know what information is already available and can be useful to groups concerned with problems such as consumer issues, organic farming, family farms, farm workers, etc. In this vein, what kinds of publics are served by the existing University facilities and information services? Also, what kinds of questions are raised by groups that are not the conventional audience?

The second suggestion is for an intellectual advocate of sorts. This would be an office where many of the questions pertaining to the uses and misuses of the University can be channeled; where needed or suggested research by public bodies not having the know-how or current access can be directed; where faculty interested in taking on new projects can be encouraged; where social and environmental impact implications of agricultural research is examined. Also, this office might see to it that the University issue an annual report as is done by most corporations. Such a report could have a summary of its financial resources and sources, the research projects being undertaken, the nature of advisory committees for such research, etc. This report could anticipate much of the criticism and queries currently being directed at the University, and also make the University straight forwardly accountable to the public it purportedly serves.

These are but two suggestions made because they seem manageable and also provide some direction to our intent to follow up on the deliberations that we all shared in today. We would like you to be in touch with us and with each other. We see this gathering, not as just another conference or one-shot affair, but as a basis for an on-going exchange where the public and the institutions of learning it has set up can fulfill the original mandate to serve all the people.

WHAT RESEARCH GETS DONE AT A LAND GRANT COLLEGE: INTERNAL FACTORS AT WORK*

(By Isao Fujimoto and Emmett Fiske, Department of Applied Behavioral Sciences, University of California, Davis)

ABSTRACT

Factors that influence faculty in a land grant college of agriculture to do the research they choose to do, can be grouped around the following areas: a scientist's quest for knowledge, funding, academic socialization and sensitivity to pressing social needs. The relative import of these factors can be summarized as follows: scientific curiosity gets the scientist into the research system, funding determines what is worked on and the process of academic socialization affects the strategy taken—especially by the non-tenured faculty. Research considerations in response to broader societal trends, be it the food, population, or energy crisis or sensitivity to the concerns of the consuming public, is at best diversionary unless such response is congruent with the overall thrust of the College of Agriculture or department of which the scientist is a part. Departments provide a social milieu which reflects differences in sensitivity to redirecting research or inclinations to examine the broader implications of the research done. The implications of these observations, based on interviews with tenured and non-tenured faculty and chairmen of all 25 departments in a major land grant college of agriculture, is discussed, especially in view of increasing calls for accountability by public interest groups.

PART I: OVERVIEW: UNIVERSITY OF CALIFORNIA AND THE LAND GRANT SYSTEM

The University of California's Agricultural Experiment Station is part of the National agricultural research operation established by the Hatch Act of 1887.[1] In brief, this Act provided for the direct payment of federal funds to states that established agricultural experiment stations to engage in "systematic scientific study of problems relating to agriculture."

Section 2 of the Hatch Act has been the subject of much controversy. The first part clearly refers to the *commercial* aspects of AES research:

"It is the policy of Congress to promote the efficient production, marketing, distribution and utilization of farm products as essential to the health and welfare of our people * * *"

However the following bears more directly on the *social* aspects of agricultural research activities:

"It shall be the object and duty of the State agricultural experiment stations * * * to conduct * * * investigations as have for their purpose the development and improvement of the rural home and rural life and the maximum contribution by agriculture to the welfare of the consumer."

From the late 1880s to the 1960s the research activities of the various state agricultural experiment stations (SAES) were geared more towards the production, processing, and marketing ends of agriculture—especially since this was the period when, although fewer people and less land were devoted to agricultural production, the production per acre was continuously on the increase. The 'fruits' of SAES research were directly evidenced in larger crop production and more stable working conditions for employees. Little concern was given to a national agricultural research direction, let alone the social implications of all of this research effort.

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* Presented in the session on "Structural Influences on Research in the Land Grant Colleges," 1975 Rural Sociological Society Meeting, San Francisco. This is part of a forthcoming report on the "Social Implications of Agricultural Research."

[1] Appendix A of "Hard Tomatoes, Hard Times" (pp. 255–263) discusses legislation relating to Land Grant Colleges and, more specifically, to state Agricultural Experiment Stations.

The 1960s seemed to bring a change in how agricultural research was viewed. In 1965 the United States Senate Committee on Appropriations recommended that the Nation's agricultural research be evaluated and assigned future priorities and responsibilities. The outcome of this was the 1966 publication entitled *A National Program of Research for Agriculture* which, among other things, recommended (a) the defining of goals, purposes and scope of agricultural and forestry research, and (b) the development of a research classification system compatible with current and proposed retrieval systems. This second recommendation became the yearly *Inventory of Agricultural Research* report that compiles statistical information on research conducted by the SAES, the USDA, the Schools of Forestry, and other Cooperating institutions.

For the 1974 Fiscal year the United States agricultural research effort looked like this:

TABLE 1.—U.S. AGRICULTURAL RESEARCH, FISCAL YEAR 1974[1]

Institution	Budget	SMY's	Number of projects
SAES	$423, 892, 652	6, 034. 2	17, 517
Forestry/other cooperating institutions	13, 081, 775	215. 8	594
USDA	308, 091, 970	3, 108. 0	4, 436
Totals	745, 066, 397	9, 358. 0	33, 547

[1] USDA. Inventory of Agricultural Research, Fiscal Year 1974, vol. II, pp. 36, 65, 70, and 77.

Of this total, the California Agricultural Experiment Station (CAES) (the *largest by far* of all the SAES) accounted for 9.5% of the SAES budget ($40,623,202),[2] 9.0% of the SAES manpower (545.5 Scientist Manyears), and 7.1% of the SAES research projects (1362 projects). The comparable figures for 1975 are 9.5% ($40,725,278) of the budget, 8.3% (496.35 Manyears) and 3.1% (706) projects indicating the increase in California's proportion.

The California Agricultural Experiment Station can in turn be subdivided into its three component parts: The research efforts undertaken on the Berkeley, Davis, and Riverside campuses.

Table 2 breaks down the 1973–74 CAES research budget and manpower by campus components:

TABLE 2.—THE CALIFORNIA AGRICULTURAL EXPERIMENT STATION, RESEARCH BUDGET AND MANPOWER, FISCAL YEAR 1974

Campus	Budget	Percentage	Manpower	Percentage
Berkeley	$8, 844, 776	22. 0	163	19. 9
Davis	21, 273, 451	52. 8	445	54. 3
Riverside	10, 164, 801	25. 2	221	25. 8
Total	40, 283, 028	100. 0	819	100. 0

The above indicates that the Davis component *alone* has a larger research budget than any other State Agricultural Experiment Station in the Country.[3]

Classification of agricultural research

Another valuable contribution of the 1966 report *A National Program of Research for Agriculture* was its classification of agricultural research into eight possible goals:[4]

Goal I: Renewable Natural Resources & Environmental Quality
Goal II: Environmental Enhancement & Recreation

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[2] This figure includes an additional $340,174 in administrative projects which are *not* reflected in Table 2 above. When the total amount spent in administrative projects is included, the CAES Budget for FY 1974 approaches $42,000,000.

[3] For a comparison with the other SAES see the USDA's Inventory of Agricultural Research, Vol. II, p. 113–114.

[4] For a more detailed description of the Goals and the RPA's continued under each see the USDA's *Manual of Classification of Agricultural and Forestry Research*.

Goal III: Production Capacity and Efficiency of Domestic Plants and Animals
Goal IV: Product Improvement and Marketing
Goal V: Protection of Plants and Animals
Goal VI: Family and Consumer Welfare
Goal VII: Community & Economic Development
Goal VIII: Disciplinary Research

Each Goal was comprised of various research problem areas (RPA's) that contributed in various ways to the attainment of the Goal.

In the 1971 "Five Year Plan for the California Agricultural Experiment Station" the CAES administration narrowed down agricultural research goals into one of four Categories:[5]

Category (1): Natural Resources & Environmental Quality
Category (2): Commercial Agriculture—Production, Processing, and Marketing
Category (3): People-Oriented Research—Consumer, Family, and Community
Category (4): Disciplinary Research

The key element in both the USDA and the California classification systems in the Research Problem Area (RPA). Each of these 98 'building blocks' is the basic and most detailed unit of the respective systems.

This research information gets translated into the yearly *Inventory of Agricultural Research* through a series of Current Research Information System (CRIS) forms each of the State AES sends into the USDA. These four forms include:

The AD–416 form is the *Research Resume* and "answers the questions of What? Who? How? and When? about the project."

The AD–417 form *classifies the research*, and "reflects what the project proposes to do."

The AD–419 form (e.g., *Research Funds and Manpower*) is completed annually. "It reflects (a) the sources and amount of funds used on the project for the reporting year, and (b) the manpower devoted to the project during the reporting year."

The AD–421 form is the *Progress Report* and is also completed annually. "It reports progress on the project since the last report and lists publications derived from the project. This form is also used to terminate a project."[6]

In addition to research project classification based on the RPA's the AD–417 form also classifies research projects on the basis of *Activity* (the purpose and nature of the research) and *Commodity* (the objective of the research). The most important component, though, is the RPA. (Table 3 charts the research effort for the Agricultural Experiment Station for 1971–74.)

Thus far we have spoken in general terms about the CAES and the individuals comprising its research effort. Without mentioning the problems of the reporting classification systems, there are approximately 1,035 ongoing research projects in the California AES—and these do not lend themselves to quick analysis. One possible way of analyzing AES research is by Department.

Research projects and their personnel operate within the context of the academic Department. Funds are channeled through the Departments, and the principal investigators are on the Departmental payrolls. We have classified the twenty-five academic Departments on the Davis campus engaged in AES research into one (or a combination) of four research Categories developed by the CAES administration (and noted on page 6). The basis for our classification of each Department in this manner rests on each's research *budget* allocation to RPA's in each of the four categories. The category receiving the major emphasis, dollar-wise, (e.g., containing over 50% of the Department's budget) is then identified with that particular Department. Table 3 shows the Departments on the basis of Research undertaken.

PART II. DEPARTMENTS AND THEIR RESEARCH ORIENTATION[7]

The twenty-five departments can more or less be grouped into four categories according to their research emphasis. Three departments focus on natural resources and environmental quality (Category (1)), twelve on commercial agriculture (Category (2)), three on people-oriented research (Category (3)), and three stress basic disciplinary research (Category 4). Four departments' research emphasis is equally divided between two categories.

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[5] Basically, the eight USDA Goals are more specific examples of the four California Categories, and are listed under various of the four Categories.

[6] Examples of these four AD forms are included in the Appendix of the forthcoming Report.

[7] Information for this section is distilled from results gathered during interviews with the College of Agriculture Department Chairman on the U.C. Davis Campus.

The distinctions in research orientation are directly reflected in terms of how departments saw their major publics and audiences. Category (1) departments saw governmental agencies and environmentalists as a major audience. Seven of the twelve departments in Category (2) identified the Agricultural Industry as their public. The majority of the people-oriented departments [Category (3)] was the "consumer" as their public while all discipline-oriented departments defined the scientific community as their main audience. However, the overall identification with Agriculture was still evident as eleven departments (44%) identified this as their primary audience, while twenty-one departments (84%) listed it among the top three publics being relevant audiences for the research done.

More than the association between the category of research orientation and the department, in terms of departmental influences on research, a variety of action is possible. Research priorities are set in five ways: left up to the individual scientist (32% of the departments); by research advisory committees (24%); consensus of the faculty (16%); by the chairman (12%); or already established by the AES five and ten year recruitment plans (12%).

Chairmen also differ in the roles they exercise in the departmental research efforts. The efforts are of three major types: obtaining (28%) or allocating funds (16%) research; or serving as an administrative functionary in departments which have strong and independent faculty (24%).

As for factors that influence choice of research topics, the most popular response is summarized in the statement "money can influence (or dictate) what research gets done." This was the answer of 48% of the chairmen. The second most mentioned factor was the capabilities of the individual scientist (28%). Other factors cited were the research milieu of the department (8%), peer review influences (4%), and ability to write good proposals and knowing the sytsem (4%).

The importance of money and writing proposals to get money become even more apparent when the first, second, and third choices are all considered:

TABLE 3.—FACTORS INFLUENCING RESEARCH CHOICE

Factor	1st choice	2d choice	3d choice	Total (number of departments)
Money	12	6	2	20
Capability/expertise	7	6	6	19
Proposal writing ability	1	6	3	10
Peer review	1	1	1	3
Department composition	2			2

The major difference is shown by Category (4) departments which cite department composition as a major influencing research choice. Unlike the other departments, money was not mentioned as a factor by them.

The structural reorganization of the College research program had differential impact on the departments. One of the avowed aims of the new Dean upon assuming office in 1970 was to shift attention away from production agriculture towards more people-oriented concerns. The accomplishment of this intent is most apparent from the reactions of chairmen in Categories (2) and (3).

The latter chairmen were unanimous in stating that reorganization had a large impact on their departmental activities. They got more research personnel and budget; and all were pleased with the changes that took place.

Category (2) departments that cited the reorganization as having a "large impact" on their research effort did so if they were positively or adversely affected. The plan hit hardest on those that were cut back on funds—or had their research positions reallocated.

The Commercial agriculture-oriented department chairmen responding with "some impact" were affected neither way. Those who indicated "little impact" saw research activities as being unaffected since "people and money are the overriding factors," and reorganization to them was merely an administrative exercise.

The influence on research choice (of the broader societal factors such as the food and population crisis, the energy crisis, and greater calls for accountability) were minimal to moderate, though the answers belied the significance of these forces.

The Category (1) chairman tended to see the world food crisis playing a major role in their current research efforts. Such projects as breeding salt tolerance into plants, and hydrophonics, had gotten funding—and the faculty felt that their efforts were once again recognized by the AES administration as importance.

Category (2) chairmen had mixed feelings about the world food crisis. The general feeling expressed was that the impact was not as great as might be expected because research direction was not subject to quick shifts. Some chairmen questioned the use of the word "crisis," and indicated that they had been doing research on increased food production for a long time. They felt that such redirection would most likely come about through the recruiting of new faculty.

The Category (3) and (4) chairmen also viewed the world food crisis as having minimal impact on their research activities.

In sum, the overall feeling emerging from the responses to this question was that people, especially their expertise and interest, coupled with funding were overriding considerations when redirecting research efforts.

In terms of the energy crisis, the Category (1) chairmen tended to place more importance on this than did the other Category chairmen. Such importance was seen through research funding availability for energy-related projects.

The Category (2) chairmen's research projects seemed to be less affected by the energy crisis. Several chairmen noted that the 1974 joint study by U.C. Davis and the California Department of Food and Agriculture[8] contended that agriculture in the State used less energy than did other sectors of California's economy—and they wholeheartedly supported this position. Other chairmen felt that the impact would be greater over the next couple of years when support for projects focusing on decreased energy usage increased. The most important project mentioned in this regard was the nitrogen fixation one currently underway on several U.C. campuses that attempted to get plants to "fix" their own nitrogen requirements so that far less energy inputs need be applied during the food production process.

The Category (3) chairmen felt the energy crisis had had some impact on their departments' research efforts since there was now more emphasis on natural foods and fibers versus the previous emphasis on man-made (and petroleum-based) ones.

From the question: "What kind of impact has the public's concern over the quality and relevance of land grant agricultural research had on your department's research efforts and/or redirection?" The overall responses evoked were varied, opinionated, defensive or congratulatory as to how responsive their departments were to public inputs—suggesting the sensitivity of this topic.

The Category (1) chairmen were mixed in their feelings regarding the impact of public concern—although such seemed to have had less impact on them than on chairmen in other departments. The "public" most often mentioned by them was the local and State agencies; and as one chairman stated: "Unless money is attached to concern nobody will do anything."

The Category (2) chairmen generally felt that public concern had had some impact on their departments' research efforts; although much of it was expressed in negative terms. They cited such publications as *Hard Tomatoes, Hard Times: The Failure of the Land Grant College Complex*, *The Dirt on California*, and the Nader report entitled *Power and Land in California* as examples of "static" which they felt was one-sided and did not take account of the research process that existed in Land Grant institutions.

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[8] "Energy Requirements for Agriculture in California: Joint Study by the California Department of Food & Agriculture and the University of California, Davis," January 1974.

The Category (3) chairmen placed a little more emphasis on public concern than was found in the responses of other Category chairmen. This was seen through their increased budgets, staffing, and new recruitment emphasis on people-oriented research.

The Category (4) chairmen also stressed the importance of departmental sensitivity to public concerns. One chairman noted that the Pounds Report's[*] impact on disciplinary research departments had been quite favorable since it stated that too little money was going into basic research in this country.

What stands out from the responses to the question of public concern and the degree to which it is manifested in departmental research activities is the diverse way in which the "public" is defined. Whereas some chairmen equated it with funding sources others saw it exemplified in the types of students attracted to their teaching programs.

Given the increasing pressure on food needs, the limited supply of fossil fuels, and the apparent peaking of the effectiveness of current agricultural research to increase crop yields—several questions were asked to gauge potential shifts in research direction seeking alternative solutions. They focused on the extent of department research support for studies into agricultural approaches that would increase yields without the social or ecological consequences associated with the capital and technologically intensive mode of production.

One question asked in this area was: "What do you see as the long range consequences of current agricultural research that seeks high yields through production methods that rely on intensive capital, technology, and energy inputs?" The responses tended to fall into one of two extremes:

(a) We have no alternative than to pursue our present course of agricultural production; or

(b) Agricultural production in the future will tend to be more energy-efficient and integrated than it is at present.

Table 4 documents the responses to this question by department research orientation:

TABLE 4.—LONG RANGE CONSEQUENCES OF CURRENT AGRICULTURAL RESEARCH

Response	Departmental research orientation									
	Category (1)		Category (2)		Category (3)		Category (4)		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
We have no alternative; we need current agricultural technology if we are to achieve the food needs and maintain the lifestyle we currently enjoy.	....	....	7	58	1	33	....	....	8	32
Trend toward more efficient use of resources; integration of resources—integrated control of pests.	3	100	4	33	1	33	1	33	9	36
Question is not applicable to us—our research is basic in orientation.	....	....	1	8	....	....	1	33	2	8

The responses are somewhat correlated with departmental research orientation. The Category (1) chairmen all felt that in the long run our agricultural research would have to be modified and integrated in order to achieve a more efficient use of our limited and non-renewable resources. Each of the chairmen stressed the need to either develop new plants for energy sources or use less than the current amounts of energy inputs in the crop production process.

The majority of the Category (2) chairmen shared a different view. Fifty-eight percent of them felt that in the long run we had no choice but to pursue our current agricultural techniques if we were to maintain current levels of food production. In the words of several chairmen:

"To feed the nation in any other way is not feasible. We're locked into the system because it hits the pocketbook;" and

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[*] National Research Council—National Academy of Sciences: "Observations on the state of USDA and State Agricultural Experiment Station sponsored rural sociological research."

"[mechanical] harvesters aren't cheaper, but they can be counted on. The corporate-type farm has taken over due to the cost of production * * * In the future the trend will be toward *more* [emphasis his] mechanization and specialization."

The Category (3) chairmen were rather mixed in their feelings toward the long range consequences of current agricultural production techniques. One of these chairmen felt that "we have to go to monoculture with population pressures the way they are"—while another stressed the need for better use of our limited resources.

The Category (4) chairmen (although also having mixed responses to the question) were open to alternatives, as none of the three expressed the opinion that we had no choice but to continue with our current production techniques.

PART III. FACTORS INFLUENCING RESEARCH CHOICE AND APPROACH

This section looks at the individual Agricultural Experiment Station researchers and attempts to pinpoint the major factors that affect the work they undertake.

In order to get a representative sample of the Davis AES personnel on this topic, we interviewed 47 of the then 400 people involved in Experiment Station research. This came about from our aim to randomly select two people—one person at the full professor (tenured) level and the other at the assistant professor (non-tenured) level.

The eleven interview questions concerned themselves with the research process at the University of California's Agricultural Experiment Station; specifically, with motivation, choice of researchable area, support, pressures, dissemination of research findings, beneficiaries of research, feelings about a Social Impact Statement, and possible changes recommended for the California AES.

Here we will focus primarily on those interview questions that dealt specifically with factors influencing research choice by Faculty members.

> "What are your main and secondary sources of research funding?"

There seemed to be a correlation between rank and funding source. At the tenured level the largest response in terms of primary and secondary funding support sources was for the Agricultural Experiment Station (16/40, or 40%). Governmental agencies came in second (14/40, or 35%, and Industry and/or commodity groups rounded out the funding sources (10/25, or 25%).

With the assistant professors the responses were quite the opposite. The category of Industry and/or commodity groups support was the one most often mentioned (13/30, or 43%); while Agricultural Experiment Station support was second (9/30, or 30%) and Governmental agencies were third (8/30, or 27%). Possible explanations for this difference are discussed later.

> "What is the major factor motivating your research choice here at U.C. Davis?"

What emerged from the interviews was the general picture of the assistant professors' main motivating factor in undertaking research *to achieve tenure*. And in order to do so publications were very important.

For the full professor, on the other hand, the important motivating factor was in doing what one wanted to do e.g. the pursuit of scientific curiosity.

> "Do you feel there are internal (within the University) pressures affecting your research choice? If pressure is felt, how is it manifested?"

While "internal pressure" to the full professor was most often manifested through the lack of AES funding—to the assistant professor there were additional manifestations. The most common expression took the form of heavy course load/work load assignments. Six of the fourteen assistant professors were expected to be advisors to students in their departments.

A second way in which pressure was internally felt was through discrimination by the department Faculty members and the AES administration—indicating the area towards which the assistant professors' research should focus. Four of the assistant professors were of this opinion.

The third most common response to the question was "through heavy advising loads." Three of the assistant professors expressed this.

All of these are examples of constraints on time and a factor of status position within the department and the mileau of the College.

> "If the Industry pays the tab they have the right to call the tune. With our present partnership between the University and Industry the arrangement is going well."

The other manifestation also reflected a sensitivity to the funding source; specifically, Industry desires for quick solutions to problems faced by them: "They become impatient with you if you don't get the findings out." (Three of the full professors indicated this sentiment.)

For the seven assistant professors (41%) who responded affirmatively to this question, five also felt the influence of the external funding source. For example:

> "You have to gear your research to the funding sources . . . there is big money available from production ag with which you can dig your own grave . . . The University gave me an office with no tools, I had to go to where the money was . . . which was the chemical companies."

> "How are your research findings disseminated?"

The responses here seemed to be related to rank. Of the assistant professors who responded most stressed dissemination through the professionally refereed and edited journals. Fourteen (82%) mentioned this as being the most important dissemination route. To cite one example:

> "What is most important is the *date* the article is accepted for publication . . . If you come in second you come in last . . . because that's the date that counts. Secondly, the journal chosen for publication of your article should be a *reputable* one * * * not a crapsheet * * * which are unrefereed publications; third, the journal should be appropriate for the subject matter of your article; and fourth, the journal you choose depends on how long a time you want to wait until its published."

The full professors in the survey placed less emphasis on the professionally refereed and edited journals for research dissemination. Other methods such as books, bulletins, and monographs were also mentioned by them.

From the above it seems that once people get tenure their choice of publication mediums expands. Not only can research be disseminated through more types and varieties of publications, the research itself can be expanded timewise and be done in more depth. Instead of feeling as did one assistant professor that "publishing prematurely helps take the pressure off you for tenure," the tenured person can engage in longer-term research.

> "Who do you feel are the main beneficiaries of your Agricultural Experiment Station research?"

From the responses of both the assistant and full professors emerged the following: First, the most often referred-to audience was the "University and Industry." Forty-two percent of the full professors and twenty-four percent of the assistant professors considered this to be the main beneficiaries of the research they had done. The "University" could be considered beneficiary in the immediate sense that everything done is judged by their peers who operate within the University system. "Industry" (and commodity groups) become beneficiaries through two sources: (a) the majority of the U.C. Davis departments can be characterized as doing *applied* research and (b) the largest source of extramural (non-University generated) funds comes from Industry sources.

Secondly, the academic-scientific community being the main beneficiary of research was the response most frequently given by professors in Disciplinary research (Category (4)) departments.

One of the assistant professors commented on a possible factor influencing the output and audience of AES research as:

> "Many groups who come to the University cannot articulate what research needs they have, nor what they feel my department can do to help address these needs."

The key ingredient seems to be *organization and identification of a viable audience*. One of the full professors stated this quite succinctly:

> "The idea of research is to benefit the public; but what actually happens is that although research is available to all, it permits those who use the information to get a slight increase in production and efficiency."

What emerges from the interviews

If we can be allowed to generalize about the system in which the Agricultural Experiment station researchers operate the following picture seems to reflect influential factors in the development of an AES scientist.

1. Entry into the System.—An assistant professor is hired into the University of California system with the feeling that he or she is free to engage in the research of his or her choice so long as it relates to the departmental area of research thrust. The assistant professor is given a research: teaching ratio that at U.C. Davis in 1974 approximated 71% research and 29% teaching. What should be emphasized here is the ***high percentage emphasis on research.***

The assistant professor is also usually assigned the responsibility of teaching lower division courses (which have larger numbers of students and a corresponding greater demand upon the professor) and/or in the development of new courses.

The assistant professor is also expected to be an undergraduate advisor and serve on various departmental and College committees.

2. Importance placed upon getting Research Funding.—Given the realities of such academic expectations a typical action taken by assistant professors is to spend their first year developing their courses and writing research proposals so that the projects can be undertaken on the scale desired.

The second year is one where the assistant professor learns to say "No" to requests by departmental people *and students* that he or she take on additional duties. The importance of published research becomes a deciding factor in the assistant professors' pursuit of research money from wherever it can be gotten.

3. Academic Socialization and Research Strategy.—The third and fourth years find the assistant professor engaged in research—but research of a *short-term* nature which results in quick publication. He or she becomes less accessible to students and others.

The fifth and sixth years are the time of peer judgment. The assistant professor either gets tenure and "survives," or is denied tenure and "perishes." What determines this? *Publications in professionally refereed and edited journals.* Most of the assistant professors interviewed were very aware of this fact of life. In a sense then, the *immediate* audience for the assistant professors' research can be cal'ed the academic (peer reviewed) and scientific (professional journal) community.

But in order to get research published the assistant professor needs a certain level of monetary support to engage in research; especially research directed at short-term results which can be quickly published.

Who is interested in short-term answers? To a lesser degree the Federal and State government—but in order to get this kind of funding (which most often comes through various agencies) an assistant professor has to show some preliminary results of research in the research proposal. This is not likely if the person is just getting started in the AES research process.

According to the assistant professors interviewed the area most likely to fund short-term research in sufficient dollar amounts was the agricultural industry/commodity groups. As one assistant professor commented:

> "* * * my area was basic research and the funding was in my applied research. Since the department had given me only $800.00 in research funds for my first year I had to seek out funding which was more likely to come from applied sources."

Regardless of how an assistant professor may feel about using Industry funds, the realization that research publications determine one's future in the University weighs heavily on accepting such support.

What, then, are the results?

> "The system bends you, you do not change the system. You have to play the game to survive in the UC system—do your research, get it published, get tenure, and then sit back and think."

Three case studies of AES researchers amplify on these views.

THE RESEARCH PATH MODEL: EXAMPLES OF THREE CAREER PATHS

From the preceding section on factors influencing AES researchers' choice of focus we have developed the following model:

Person enters the system	Proceeds through system	Is evaluated
Research orientation compatible or incompatible with departments orientation?	Teaching-research load	By peer review.
	Nonresearch distractions.	
Previous (acceptable) publications by researcher?	(a) Course load, course and program development.	
	(b) Advising load.	
	(c) Committee load.	
	Conditions for tenure: The number of publications in professionally reviewed and edited journals.	
	With sufficient or insufficient research funding from AES or from extramural sources.	
	Research findings submitted to audience and funding sources.	

The weighting tends to give more importance to funding source since source can influence the research undertaken both by (a) *What* is researched (b) for how long a time, and (c) in what manner the research findings are disseminated. Funding source becomes even more important in departments needing expensive research labs and equipment in order *for projects to be carried out.*

Ideally: the person comes into the UC system with previous publications and interested in undertaking projects which also seem important to the other departmental faculty. The person has a teaching load which makes relatively few demands on his time, and he does not have to engage in advising or committee work.

The researcher starts out either with sufficient AES funding—or support from extramural sources.

His research findings can be submitted to professionally reviewed and edited journals in his field of interest (or discipline.)

RESEARCHER NUMBER ONE

Such is the example of Researcher Number One. This researcher is 35 years of age, and came into the UC system as an Assistant Professor and AES researcher in 1969. Before coming on board, he had already published nine scientific articles over a five year period.

About his UC job he had this to say: "My interests and the program interests were compatible * * * the research was basic and also directly applicable to food products."

Researcher Number One came into the UC system with the desire to teach because "there seems to be an infusion of new blood and ideas that keeps coming in and stimulating those of us here * * * to try out new ideas."

As for his teaching responsibilities, he was given a 75% research and 25% teaching load designation; the stress, however, was on research because the department specifically hired him because of his research interests: "I'm in a very fortunate position here in that there are so many engineering problems in the department * * * so that funding and student interest are high. I am at present the only chemical engineer in the department of 30 faculty members * * * and chemical engineering is the focal point for the Industry * * * Here, they can see the physical process so the money is not hard to get."

In regard to funding: In addition to his AES support (which in 1973–1974 amounted to around $57,500) he received Industry funds[10] of approximately $64,000 which came in the form of money and lab equipment necessary for the completion of his research.

Where did his research finding end up? "I try to cover quite a few (publications). The people who read the Journals of (he then named two professionally academic journals) are those most likely to use the technology we develop." He additionally included two other scientific journals for sources used by him to disseminate his research findings.

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[10] Both private and through commodity marketing order agreements.

What about his opinions on peer review? "I had to decrease my teaching load and do research in order to survive."

Did he survive? On July 1, 1974 Researcher Number One became an Associate Professor. He summed things up like this:

> "My major concern is the balance of teaching and research . . . Most programs have enough staff to handle the teaching load: Here (when I started) * * * seeing the need for more of my input into the department's courses and simply not being allocated the time to do it."
>
> "For 1975 I'll be 40% teaching and 60% research, with the charge of also developing some new courses which I feel are essential."

In summary, Researcher Number One was a commodity in demand when he was hired into the UC system—and the only concession he had to make was to downplay his teaching function during the time it took him to undertake his research and et tenure. And now that he has this he can do what he came here in the first place to do: "I came here primarily to teach."

There are other paths taken by Agricultural Experiment Station researchers, as outlined below in the cases of Researcher Number Two and Researcher Number Three.

RESEARCHER NUMBER TWO

Researcher Number Two is 36 years of age, coming into the UC system in 1968 as an Assistant Professor and AES researcher. He had already published 10 research findings while doing graduate work at another institution.

Researcher Number Two also came here with the hope of teaching:

"I originally hoped to stay outside of the University system because of the research pressures I'd heard about, and try State College level teaching; however, the best job offer came from UC Davis where I could do 25% teaching and 75% research."

Up to this point cases one and two are fairly identical. The next question delves into Researcher Number Two's problems and hassles along his career path:

"When I arrived on campus I was told 'you will do research in your area of interest,' but because my area was basic disciplinary research and the funding was in applied I had to seek out funding, which was more likely to come from applied sources * * * You have to gear your research to the funding sources.

"I decided to spend my first year in developing courses instead of pursuing research * * * and became very active in the Division of Environmental Studies program. Then about the third year the Committee asked me 'How many pubs, Doc?' and the question became how do I get grants * * * My DES work had to go in order for me to survive in the system."

Begrudgingly, Researcher Number Two went after the applied research funds: "Philosophically, I'd have to agree that our work in the University should be in the applied areas of some benefit to the people of California." He noted that he sought AES, Hatch Critical Research Funds, DuPont Young Faculty Grants, EPA grants, grower group fund, Industrial and NSF support: "I spent a lot of time writing up proposals."

He continued, "Since 1971 (when I was three years behind in publishing with two years to go before tenure considerations) I've been working at a steady pace * * * turning out 14–15 publications (five or six of which are published, with the rest submitted for publication) * * * turned out 3 PhD's, turned out 4 Masters people, and worked, which was my biggest personal thrill, with from 29 to 130 undergraduates and graduate students."

Researcher Number Two commented on his previous year's activity:

"Beginning in the summer of 1973 I started writing for 6–7 months without a break." Out of this came 14–10 publications referred to earlier *and* "burned-out stomach linings."

He summed up his years in the UC system this way:

"I've done very few things I've wanted to do * * * the system bends you; you do not change the system * * * I'm after satisfying work * * * It takes getting into the UC system to see the pressures and stress involved * * * you need a real religious level of satisfaction coming back to you in order to survive."

How did Researcher Number Two fare? He became an Associate Professor on July 1, 1974—and the last we've heard he was on leave up at his cabin in the Sierras.

The example of Researcher Number Three stresses the extreme importance of having acceptable publications in the UC research process.

RESEARCHER NUMBER THREE

Researcher Number Three is 36 years of age, and came into the UC system as an Assistant Professor in 1969. His desire was also to do a lot of teaching, and was one of six "new wave" professors hired by *the department*.[11]

His research: teaching ratio was 60% research and 40% teaching—although he felt this was grossly inaccurate since about 75% of his time was devoted to teaching duties.

Researcher Number Three noted that "I can't say no" to taking on additional non-research related activities, partially because "teaching should be the University's top priority, especially as it relates to the training of students on how to do relevant research (which he defined as "applied research in areas of social needs for those not able to pay for research) * * * I feel many UC professors are second-rate teachers."

When Researcher Number Three started at UC Davis his research interest was on long-term international agricultural development—while the department's was on short-term local (e.g., pertaining to California) research; and he had to "prostitute myself at the beginning" and go into less depth in his work.

Researcher Number Three did comment that his research projects were what he wanted to be working on *although* the problem of disseminating the results to his audience comprised of "people with social needs and not being able to pay for it" was next to impossible because "research done at UC is research primarily geared for publication in respectable journals," and *his* audience did not for the most part subscribe or even relate to such mediums. (All of his funding has come through the USDA, the AES, and the State).

Did Researcher Number Three have any further comments?

"The problem is faculty who, having come up through the UC system, are now concerned with perpetuating it * * * The real importance in having tenure is I can then more actively pursue 'outside' funding, and perhaps set up my own program with the department * * * although * * * if I don't get out some publications during the next year I probably won't be around much longer."

What happened to Researcher Number Three? He was denied tenure, and his case is under review. He will probably be terminated from the University of California June 30, 1976.

PART IV. IMPLICATIONS AND SUMMARY

The research complex of the Land Grant College is a major scientific effort whether measured in money spent, scientific manyears involved or numbers of projects undertaken. The increasing attention directed to issues of food, energy, and environment—all basic to survival and all prime areas of research interest—will continue to keep the activities of the Land Grant College in the spotlight.

Yet recent criticism has questioned the quality and limited nature of the public directly benefitting from the work done. All this led to stimulating an inquiry into what factors were involved in influencing the choice of research that is worked on, and identifying prospects for change in the current situation.

The major factors at the University of California, Davis (largest Land Grant College in the United States) are summarized in Appendix Table 2: What Influences what gets Researched. Contrary to the expectations that a scientist's curiosity and abilities will be the most important factors in determining what research gets done, money is identified as major. Without funds, the best ideas cannot be tested. Whether a research project gets started or not, let alone what, is dependent on money. As to specifically influencing what is researched, the availability of money for doing work that needs quick results matches the needs of the non-tenured professor with the organized Agricultural commodity groups. This is as clear a case as any where money not only determines what research is done but also specifies in what area.

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[11] Of the six, only he and one other presently remain in the department.

The capabilities of the scientist and his interests is what got him into the research system in the first place. Scientific curiosity is a more important factor in influencing research choice among tenured faculty and in those departments with a basic discipline orientation to research.

The scientist does not work in a vacuum, however, and the academic socialization process is more apparent to those in the early stages of their careers.

The pressures are manifested in various commitments on the scientist's time as well as in the disadvantages of his resources and compounded by expectations that he be productive research-wise. He is thus most susceptible to going where the money is, and working on projects which can result in quicker results and publications. All this is important in affecting research strategy.

As for sensitivity to broader issues, be it taking up issues related to the various crises or responding to calls for accountability, they are diversionary at best—and much depends on where a scientist is in his career and disciplinary placement Also certain topics are in vogue and departments vary as to the degree of freedom it allows its members to explore.

To sum up, scientific curiosity gets a scientist into the research system, funds determine what research is done, and the academic socialization process influences the strategy—especially for non-tenured members.

The implications for those interested in a research complex that would respond to various publics are several.

First of all, the Land Grant College seen in the context of the sociology of knowledge, is not monolithic. There are differences in research orientation among departments and differences in motivation among faculty with the same department depending on where they are in their careers.

Secondly, departments do differ in their social structure which in turn affects faculty who are a part of it. A department that is more open to critically examining alternatives will more likely have faculty open to examining questions posed by publics heretofore not served as much as the production agriculture sector.

In the broadest perspective, looking at research in terms of its social structure suggests insights where changes are possible. The increasing intensity of the competition between population and food production and the debate between current modes of agricultural production and the search for more ecologically accountable alternatives may require a paradigm shift as far as research organization is concerned. If such be the case, where might be the most effective place to direct this shift? The administration of the reorganization of the U.C. Davis Agricultural Experiment Station placed a premium on the recruitment of a new faculty essential to their new orientation. In light of the reality that 60% of the U.C. faculty are full professors (many within 10 years of retirement) the impact of this organization may be more emphatic and in line with Thomas Kuhn's observation about change in science. In his *Structure of Scientific Revolutions* Kuhn remarked that a shift in paradigm requires its acceptance by all living scientists or the death of those who hold the old paradigm. Given this, attention to reorganization and the composition of the faculty may be the key in developing a Land Grant College research program responsive and relevant to the changing needs of the times.

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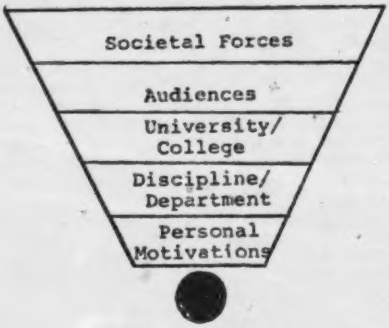
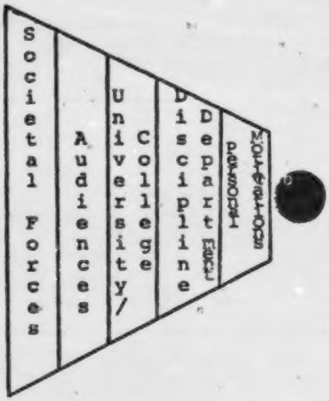
Forces Affecting Scientists at Different Career Levels:

Assistant Professor: "Feeling the Pressure"


Societal Forces
Audiences
University/ College
Discipline/ Department
Personal Motivations

Associate Professor: "Hanging in There"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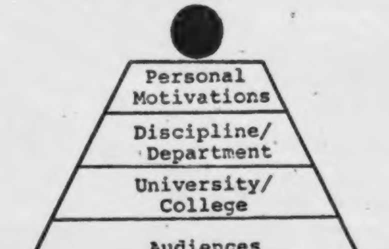
Personal Motivations

Full Professor: "On Top of Things"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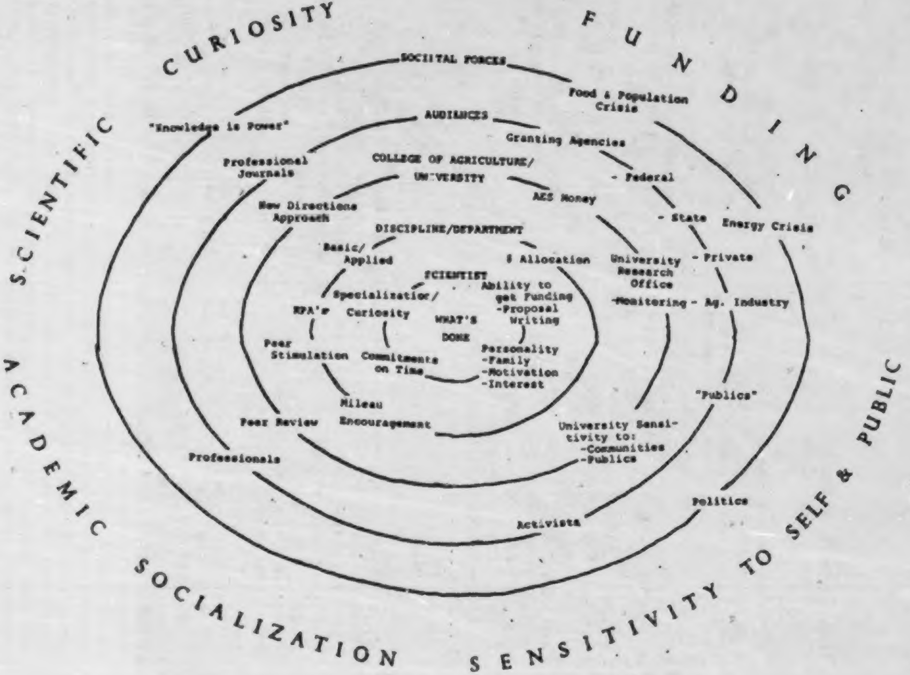
WHAT INFLUENCES WHAT GETS RESEARCHED?


SCIENTIFIC CURIOSITY
FUNDING
ACADEMIC SOCIALIZATION
SENSITIVITY TO SELF & PUBLIC
SOCIETAL FORCES
"Knowledge is Power"
Food & Population Crisis
Energy Crisis
"Publics"
Politics
Activists
Professionals
AUDIENCES
Professional Journals
Granting Agencies
- Federal
- State
- Private
- Ag. Industry
University Sensitivity to:
-Communities
-Publics
Peer Review
COLLEGE OF AGRICULTURE/ UNIVERSITY
New Directions Approach
AES Money
University Research Office
-Monitoring
Encouragement
DISCIPLINE/DEPARTMENT
Basic/ Applied
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RPA's
Peer Stimulation
Mileau
SCIENTIST
Specialization/ Curiosity
Commitments on Time
Ability to get Funding
-Proposal Writing
Personality
-Family
-Motivation
-Interest
WHAT'S DONE

PENNSYLVANIA STATE UNIVERSITY,
COLLEGE OF AGRICULTURE,
University Park, Pa., April 27, 1978.

Hon. PATRICK J. LEAHY,
U.S. Senate, Committee on Agriculture, Nutrition, and Forestry, Washington, D.C.

DEAR SENATOR LEAHY: Since I have a prior commitment on May 4 and 5, I have reluctantly declined the invitation extended by your staff to testify on rural development research during your hearings of the Agricultural Research and General Legislation Subcommittee.

I would, however, like to submit the following statement for the record. As a disclaimer, let me make clear at the outset that the opinions expressed here are strictly my own, not necessarily those of The Pennsylvania State University, where I am employed as a professor of agricultural economics. These opinions have been strongly influenced by a study I did between September of 1976 and December 1977—to evaluate the activities undertaken in pilot stage (1974-77) of Title V of the Rural Development Act of 1972, and to prepare a policy statement following the evaluation. I would like to submit for the record the executive summary of our evaluation report, entitled *Rural Development and the Land Grant University*, plus the policy statement, entitled "The Essential Process for a Successful Rural Strategy" by John M. Cornman, President of The National Rural Center and myself.

That evaluation was done in cooperation with the U.S. Department of Agriculture and The National Rural Center. It was not possible within the scope of that study to conduct a rigorous evaluation of each state's Title V program. Rather, it was an evaluation of the law—an examination of all the state programs to ascertain whether the idea underlying the legislation is inherently workable. As discussed in the attached reports, the basic idea of Title V seems viable, provided sufficient funding is allocated and effective administrative structures and procedures are utilized by the institutions of higher learning. Several of the findings and recommendations presented in these two reports are directly relevant to topics listed in your outline for these hearings. I will present some of these, and add several more that are primarily my own impressions and value judgments.

Your outline asks for testimony regarding a definition of rural development. On page 4 of "The Essential Process," we draw the destinction between *rural development* in the broad sense versus *economic development*, which is one of many possible forms rural development can take.

Rural development encompasses the many dimensions or conditions which determine the quality of life: access to public services and facilities; economic development; protection or enhancement of natural and environmental resources and the capacity of rural people, communities, and institutions to interact effectively in identifying and attaining goals. Each of these dimensions can be viewed in terms of its *present level or state* (e.g. availability of health services, median income or employment) and in terms of its *trends* (e.g. improvement, stagnation, or deterioration of the local economy, services, or environment). Development then, is a normative term implying the attainment of levels and trends desired by people themselves.

Economic development means "improving" the level, distribution, and stability of earnings and employment. This can be done in a number of ways, such as increasing the productivity and/or efficiency of existing firms and resources. It can also be done by expansion—enlargement of existing firms or entry of new industries. Expansion is not feasible in all rural areas, nor is it everywhere desired or appropriate. In areas experiencing very rapid growth, for example, local residents might feel that an "improved" trend is a *reduction* in the rate of economic expansion. Therefore economic development is a goal of a comprehensive rural strategy, but only one of many goals and a goal which must be shaped to local desires.

You also asked for testimony regarding whether we need "new and different structures for dissemination of rural development research." This question is raised in the context of another regarding "lack of extension communication with non-farm rural people," and "is the system dominated by agricultural and food and fiber concerns." This is a little like asking whether McDonalds is dominated by hamburgers. Having established a successful business based on hamburgers, McDonalds has recently introduced new choices such as fish sandwiches and apple pie. History shows clearly that the experiment stations and the extension services were founded specifically for the purposes of increasing agricultural productivity. Dramatic successes such as the development and universial dissemination of hybred seed varieties, artificial insemination, and various mechanical harvesting devices have greatly expanded farm output and have kept food prices from rising as rapidly as they would have in the absence of such technological changes. These successes have been caused largely through long term Congressional and Executive support for research and extension at the land grant universities.

Only in recent years has it become clear that agricultural "progress" sometimes is accompanied by decay of rural communities. It stands to reason that the attention of the extension and research communities would continue to be focused primarily on agricultural concerns—this has been their bread and butter for decades. Rural development is a "Johnny-come-lately," and in many locations it has not yet established a successful track record. Nor has it—and this is very important—established a political base of support such as the grass roots support that exists in many places for agricultural research and extension. Expecting the research and extension establishment to switch abruptly and predominantly to rural development is as naive as expecting McDonalds to switch over night from hamburgers to pizza.

However, while we might understand why research and extension have continued to emphasize food and fiber, and we acknowledge that this work is still very important, we can still argue that more and better work needs to be done on rural development. Having reviewed the Title V rural development programs of all 50 states and Puerto Rico, I have concluded that:

(1) It is indeed possible for a land grant university to mobilize and integrate their research and extension resources to help rural communities identify and solve their own problems. Obviously not every one of the state programs has succeeded in initiating the types of processes needed to link together the expertise of the universities with the needs and talents of the local communities. But I have been impressed with the extreme success of several programs —Puerto Rico, Missouri, California, Michigan, North Carolina, and Delaware come quickly to mind, and several others are in the same league. The kinds of processes (organizational structures and procedures) that have led to success in these states should be encouraged and replicated elsewhere.

One common feature of all the successful Title V programs is that their research efforts were "applicable" (as mentioned in your outline) to rural development concerns. For example:

A joint research/extension project for improving rural homes in the lower Penobscot River Area of Maine required 32 months to complete. As the major Title V project, the extension objectives were to facilitate the accomplishment of improvements; the research objectives were to inventory the needs and interests and to evaluate the procedures and the extent of improvements. Working with the State Department of Health and Welfare and local Community Action Agencies, the Task Force contacted 648 families, and 456 families received direct assistance in making improvements or securing new housing. A total of over 1800 families received information disseminated with Title V funds. The Extension Service continues to provide assistance to local residents.

Pennsylvania reported a joint research/extension project to help provide a primary health care center in northern Indiana County required 36 months to complete. Title V contributed organizational support and technical information which allowed the project, highly supported by local citizens, to proceed more quickly. The Mahoning Medical Center now serves 22,000 people with a physician, physician's assistant, dentist, pharmacist, and support personnel.

A joint research/extension project in Missouri was designed to gain an understanding of student dropouts and assist dropouts, schools, as well as communities in dealing with its causes and ramifications. Numerous positive outcomes were realized, including:

(a) 398 dropouts attended six GED classes, and 51 received high school equivalency diplomas;

(b) 12 dropouts re-enrolled in high school or junior high, 6 enrolled in a Voc-Tech school, 1 in cosmetology school, 3 in nursing school, 55 in a mini-typing course, 29 in fast-food training mini-courses, and 1 entered the military;

(c) 35 found employment or improved employment.

(2) In direct response to your question, "Do we need new and different structures?" I offer a mixed answer: (a) in some areas of the country, definitely no—the existing system has proven to be highly effective; and (b) in

other locations, the jury is still out. The amounts of money allocated to the states through Title V, for example, were so small (averaging less than $50,000 a year per state) that ineffective programs could be justified simply on the grounds of non-support. Let us also recognize that an alternative delivery system is not likely to be created, nor if created would it receive the levels of support needed to make it work. For better or worse, the extension system—with its vast network of state and county offices—is the only system we can reasonably expect to have in the foreseeable future. The system has proven to be effective in regard to commercial agriculture. And in many states it has already demonstrated a high level of effectiveness in facilitating rural development—despite the shortages of funds and the relative newness of rural development as a priority goal. So I feel it is premature if not erroneous to say we need a new system. A more effective strategy is to build on the strengths and correct the weaknesses of the system that already exists. If we wait for a revolutionary new system, we may have to wait a very long time, and there is no guarantee it would work any better than the one we already have.

(3) The nation's land grant universities should receive a substantial increase in funding for Title V activity. But the expansion should be done carefully, subject to successful readings from a scientifically credible evaluation, with close attention to the lessons of the past and with thoroughly integrated research and extension efforts. Evaluation should focus on the *processes* initiated by the universities toward helping the rural communities achieve greater capacity to identify and solve their own problems—short term "quicky" projects should not be encouraged to the exclusion of long term projects.

(4) Multiple-year funding commitments, should be offered so that long term commitments may be made to attract and retain top quality professional research and extension personnel. Given the degree of success demonstrated in the previous four years, rural development researchers, extension specialists and administrators throughout the nation were simply staggered by the 1979 Executive Budget, calling for a zero budget for Title V. I know faculty and graduate students who read this phenomenon as an indication that the Carter Administration had decided that rural development was not going to continue to be supported by the federal government. Some have changed their career plans, away from rural development toward areas with more solid prospects for continued funding. This kind of funding uncertainty undermines the rhetoric of officials who claim rural development research and extension are important and should be expanded.

(5) I cannot overstate the importance of *functionally integrating research and extension*. The law clearly distinguishes research from extension; their budget allocations are explicitly distinct. And in some states the two activities are almost like separate nations, each with its own language and its own currency. In the most successful rural development programs, however, we find research and extension working hand in hand. Often the same person will receive some of his or her salary and other support from Title V research monies, and some from Title V extension—a joint research and extension appointment. This arrangement is obviously conducive to an integrated research and extension program. In other cases, effective integration has been achieved through team efforts by two or more persons determined to work effectively together to solve a superordinate problem. Of paramount importance is having an administrative structure and reward system (for pay raises, promotion and tenure) which will encourage research to do their research on problems relevant to the extension people who are attempting to facilitate rural development.

Recent budget discussions seem to favor a larger share of Title V dollars for extension than for research, with a constant share going to each of the two activities. While this kind of mixture may be desirable in most locations, I would prefer to see the monies merged under the control of a single program administrator who would have the power (in consultation with appropriate state and local advisory bodies) to allocate funds flexibly in any combination of research and extension that would seem most promising as a way to attain the "essential process" for achieving rural development. As described fully in our policy statement, the essential process must be constructive, comprehensive, inclusive, and rational.

Personally, I would encourage a change in the enabling legislation (Sections 502 (a) to (d) of the Rural Development Act of 1972) as follows. First, sections 502 (a) and (2) should be merged so as to discourage separate funding and separate administration of rural development research and extension. Second, sections 502 (c) and (d), calling for small farms research and extension, should be abolished as such—with small farms work merged into the broader rural development program. Let me hasten to say that I am not opposed to small farms research and extension—rather, I would prefer to see the program efforts in behalf of small farms merged with those for other rural development concerns. This would give the state program administrators, in consultation with their advisory groups, the discretionary power to give greater or lesser priority to small farms, depending on (1) the need in relation to other rural development concerns, and (2) the expected contribution to the well-being of rural people and communities.

In closing, I would like to make two additional comments related to your outline of these hearings. First, I feel that your section III on "Applicability and Availability of Research to Rural People" places too much of the blame on extension. I am a researcher, and I will assure you that when research and extension fail to get their act together, this is as much the fault of one as the other. And perhaps even more to blame are the administrators and the professional rewards systems which sometimes discourage integration of research and extension.

Second, you asked for testimony regarding "Rigidities within Land Grant System which prohibit certain rural issues from surfacing—suppressed research." In my ten years as a professor at a land grant university, and with extensive contacts nationwide, I can recall *no instance* in which the findings of well designed and professionally executed research (that has been properly documented and well written) has been suppressed, regardless of its subject matter. The only cases in which reports have been suppressed have been manuscripts that failed to meet conventional standards of scientific quality—false inferences of casuality, invalid data, failure to document conclusions—in general, fuzzy thinking, non-scientific, pseudo research. Researchers *as citizens* have the right to publish anything they wish, including unscientific and non-documented speculations and opinions. Hundreds of publishing companies are willing to publish anything as long as the author will pay the cost of publication. However *as a researcher*, if one wishes to publish a manuscript which will carry the credibility of a scientific report, it must pass certain standards of validity, rigor and objectivity. If by "suppressed research" you refer to the quality control procedures followed by professional referred journals and experiment station bulletin editors, I would agree that such suppression does exist and should continue. Researchers should continue to be required to document the scientific processes used; they must rigorously present the findings in a way that makes the line of reasoning repeatable. Unless professional standards continue to be imposed on researchers, their writings and their expertise will be of no more value than those of any other person. And in my opinion, society would be deprived of the keys needed to unlock the mysteries of rural development. Therefore, I hope certain kinds of "research" will continue to be suppressed—the kind that fails to meet the standards of professional excellence. There is no reason that rural development research or any other applied research should be less scientifically valid than research done in any other field.

With this parting comment, Senator, I would like to thank you for holding these hearings and for giving me the opportunity to present testimony.

Cordially,

J. PATRICK MADDEN,
Professor of Agricultural Economics.

OREGON STATE UNIVERSITY,
Corvallis, Oreg., April 28, 1978.

Senator PATRICK J. LEAHY,
Russell Senate Office Bldg.,
Washington, D.C.

DEAR SENATOR LEAHY: I am pleased to comment on several items of concern about non-food & fiber research opportunities and problems. My professional interest has been and continues to be in this area of rural issues, along with extension of this work into the field. I have been successful in rising in the Land Grant system with these interests. I mentioned this in response to the possible interpretation of item D.1. on the hearings outline. I am sure that certain rural issues have been suppressed across the country from research attention, but I don't believe very many are suppressed for political or philosophical reasons. In fact; I would assert that a larger amount of non-food, non-fiber research is "boot-legged" in the agricultural establishment than is supressed. The reason for the "boot-legging" is to secure funding. The administrators are willing, but funding is insecure and difficult to find. It has been difficult to secure solid funding for the research that is now being recognized as a major concern in rural areas of the country. The sustained research support is threatened everywhere. Under such conditions it is difficult to convince administrators that they have the flexibility to free funds for research with no visible clientele that will politically support this type of effort. In spite of this, more work is now underway in this area than just a few years back.

In the Western United States, Title V of the Rural Development Act of 1972 gave a great boost in legitimatization and funding to non-food—non-fiber, although the funding was most important. The people did not need to be identified and recruited when this effort started. They were already in place. These soft funds could secure larger amounts of these people who are already in place and could extract their time from other activities to focus on non-farm rural research and education. The numbers may not be large, but most people have found administrators supportive of their interest in non-farm research, but too frequently not able to identify funds to support the effort.

Turning to observations once again on the hearings outline, item 2.a. deserves a comment. Certainly the system is dominated in the West by food and fiber concerns and it should be. Agriculture is very important to the local rural economies and to the Nation, but there needs to be increased voice about the non-farm issues in the rural setting. The problem is not one of decreasing the absolute concern of food and fiber, but in adding significant political voice on other concerns. This is very difficult. Rural leadership in health, transportation, education, law enforcement and justice, civil engineering and public administration, local and state government have not been viewed or view themselves as prime clients for research from the rural portion of the Land Grant University system. In fact, we generally find ourselves competing at all levels of government for budget to maintain our existing programs in competition for budget with the very leaders from these identified program areas. If research delivers an excellent program for rural health alternatives, rural growth impacts on industrial employment or impacts of alternative timber policy on income distribution, I would be very surprised to see the AMA or health planning agencies; railroads or the Department of Transportation; local communities, the U.S. Forest Service or BLM; communicate with research directors, deans, governors, legislators or congressional delegations saying this research from the Land Grant system was helpful and should receive budget support. The benefits of health, transportation, public services, volunteer effectiveness, etc. are types of research that have broad benefits spread among many people and groups. The benefits accruing to any individual or group is insufficiently concentrated to stimulate them to spend the limited political muscle they have to ask for funding for an outside supporting research organization. The traditional clients of agricultural research don't have this problem. The cattlemen know, the wheat growers know, timber producers know that they benefit enough individually that they can effectively lobby elsewhere for support for the research.

There are people in groups who benefit from non-food & fiber research, who do know and care, but opportunities need to be created to get these local people, both in and out of government, to say that this research makes a difference. How can we pay for local citizens or government officials to get to Washington, D.C.? We seem totally unable to do this. Local people show up in Washington when the concern is grazing fees, allowable cut in timber, or water development, but their commodity groups or the equivalent pay their way.

It may be that we need to hold 50 informal introductory sessions involving congressional delegations, some legislators, the governor, research directors and deans and local leaders to discuss what is going on and what is needed. This would include the need, the means and the support for research.

Yours truly,

RUSSELL YOUMANS, *Director*.

UNIVERSITY OF KENTUCKY,
COOPERATIVE EXTENSION SERVICE,
Lexington, Ky., April 28, 1978.

Dr. FRED SCHMIDT,
Russell Senate Office Building,
Washington, D.C.

DEAR FRED: Enclosed please find a copy of the statement I wish to submit to Senator Leahy's Committee hearings. I have also enclosed some previously published material (mine and Ed Moe's) that you may wish to include in the hearing. Hope this does some good.

Yours in service,

KENNETH E. PIGG, *Assistant Extension Professor.*

Enclosures.

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COOPERATIVE EXTENSION SERVICE IN KENTUCKY AND RURAL DEVELOPMENT

(By Dr. Kenneth E. Pigg, Assistant Extension Professor of Sociology, University of Kentucky)

In reply to an invitation to make a statement before the Senate Committee on Agriculture, Nutrition, and Forestry, Subcommittee on Agricultural Research, it is a pleasure to submit the following remarks. I am honored by the invitation extended to me, and, as one whose vocation is rural development, I welcome this opportunity to contribute to these proceedings.

I offer these comments under the presumption that the purpose of these hearings is to assess or evaluate the linkages between research and rural development activities, and to generate ideas that might lead to improving them as well as lead to speeding up rural development processes in a beneficial manner.

Under this presumption I believe several preliminary comments are in order. First, my comments are not intended to be national in scope, but ideal only with our situation in Kentucky. Extension has had active and useful rural development activities in the Commonwealth for nearly 20 years, and I offer my remarks in the context of that experience. Secondly, rural development as a research focus, a concept for empirical study, is extraordinarily complex. The variety of subjects dealt with in the agenda of these Senate Committee hearings is sufficient testimony to this fact. As a policy to guide public decision-making it may be even more difficult to comprehend and utilize effectively. This is exemplified in the present dissatisfaction over the Rural Development Act of 1972 which has emphasized rural industralization. This is especially significant since many of the people now moving to nonmetropolitan homes are not particularly motivated by improved job opportunities in rural areas.[1] Most of those who are moving to more rural communities seem to be finding employment in service industries—an extremely "footloose" set of occupations.[2] This leads to my final preliminary note, namely, that to segregate "farm" from "non-farm" rural development research will only compound the problem. The development and selection of rural development strategies are, by necessity and preference, locality specific. In some cases, industralization strategies may be appropriate and desirable. In other cases, it is not and community residents should be able to consider and pursue alternatives—which would include agricultural strategies. I believe this to be the real intent of RDA-72, but, at present, this is not an accessible strategy because we have devoted little research effort to either means or effects, and so, have effectively ruled it out. To continue to deal with rural development in "pieces" only perpetuates the mindless and tragic dualism which has contributed to both the contemporary farm problem and problems of rural development.

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[1] Humphrey, et. al., "Net Migration Turnaround in Pennsylvania Nonmetropolitan Minor Civil Divisions, 1960–1970." Rural Sociology, Vol. 42, No. 3 (Fall, 1977) pp. 332–351.

[2] Carpenter, Ediom. "The Potential for Population Dispersal: A Closer Look at Residential Locational Preferences," Rural Sociology, Vol. 42, No. 3 (Fall, 1977) pp. 352–370.

In my role as a state Extension specialist in sociology, supporting the state's rural development programs, I am called upon for assistance in local communities. One form of that assistance is technical, in which I am asked to serve as a resource person to local efforts in identifying, planning, and implementing rural development activities. Extension in Kentucky has been rather successful in this area, and has assisted local communities in a variety of ways. Between 1973 and 1976, Extension personnel assisted in the development of more than 50 rural water systems in the Commonwealth. In the same time period, they also helped local communities to establish a comprehensive planning effort (in 262 communities); provide access to jobs through a manpower training and placement program (about 12,000 people); establish successful industrial development activities (such as the tri-county industrial park in Corbin, Kentucky which will generate some 5,400 jobs); secured fire protection services in over 20 rural communities; build over 50 recreational facilities; and many more beneficial projects. It is my impression and opinion, therefore, that ample research information *is* available regarding rural development concerns. Further, the Extension Service in Kentucky is serving non-farm rural people. Undoubtedly, we can do a better job. For instance, like other "service" organizations, Extension does have difficulty reaching the "hard-to-reach" with program benefits. However, the success of the EFNEP (Expanded Foods and Nutrition Education Project) program demonstrates what is needed to overcome some of the present obstacles: (1) more manpower in rural development program areas, and (2) more programmatic support for funds for Extension which are not tied to specific projects.

Since the Smith-Lever Act of 1914, which established the formal county Extension program within the Land-Grant system, a county agent has been given responsibility for a specific program area—agriculture, home economics, or 4-H. The institution of the EFNEP program in recent years has also been associated with the placement of that responsibility upon a specific agent working in a specific county or multi-county area. No such relationship has ever been established for rural development on a long-term basis—except for certain states where federal appropriations have been supplemented with state and local funding, and these positions are usually associated with fairly large geographic areas. Rural development could undoubtedly be hastened if the personnel were made available.

Even more recently, the Extension Service has witnessed the reduction of support for program development in preference for project funding, sometimes on a competitive basis. It is my feeling that this change was, in part, an attempt to maintain accountability. Nevertheless, it has a serious impact on all Extension programs, and especially rural development programs. This is because of the nature of the benefits of rural development efforts. Since many of the important impact of rural development are qualitative and experienced only in the long-term, it is difficult to demonstrate the beneficial impacts of the funds contributed in support of a project in a sufficiently timely manner to satisfy the funding agencies. Additionally, rural development consists of a broad range of programs in which influences (and benefits) are often diffuse, intangible, and unpredictable. All of this means that each rural development activity can only be partially accountable, thus making it somewhat difficult to mobilize legislative and executive support for rural development.

Nevertheless, I see few alternatives to providing on-going general programmatic support for Extension rural development activities if they are to be effective eventually. What is also needed, then, is the development of alternative forms of accountability. One means is the more costly (perhaps) approach of employing personnel with specific Extension rural development responsibilities in rather small geographic areas. Another is to develop more sensitive evaluation techniques for program support which will satisfy the accountability needs. Such evaluation procedures should permit the negotiation of criteria for determining accountability and would approach rural development in holistic fashion.

Serious considerations given to these suggestions could serve as a starting point for addressing the issue of research availability to rural people.

I have, perhaps, created an impression with the preceding comments that no new research is needed. Let me dispel that impression.

There is a continuing and growing need for research in a wide variety of subject areas. For example, we are seeing a rather large volume of research now assembled on rural industralization and its impacts on rural communities. Similarly, the number of studies of energy plant sitings is growing. However, we know little of real significance regarding the impacts of tourist industries on local areas. In Kentucky, where tourism is annually a one billion dollar industry, we need to know how to best assist rural communities in planning ways to deal with the related impacts, but we do not know very much, and the planning is haphazard and risky at present.

Another need concerns the reasons for and characteristics of return migration to rural communities. We are seeing more of this literature, but we still need to know their characteristics, local family ties, impact on community services, demands for housing, etc. Without this information community planning is reactionary.

In Kentucky, the national demand for energy has increased the scale of coal mining operations dramatically. Since this is a non-renewable resource, the future economic and social health of the coal areas is open to serious questions. What is likely to happen when the coal runs out? How many people are likely to move? How can we mitigate the effects of the demise of coal? How can we better use present benefits from coal exploitation to assure a solid future for families and communities?

Many other questions might be, and are being posed for research activities at the University of Kentucky. Even when this research is completed, there will remain a tremendous number of needs, because this is research completed at a high level of generality, not often accepted as valid in rural communities. As noted earlier, the knowledge that is needed is of two kinds: generalizable and locality specific. Problems which are seen as suitable for research acceptable within a professional discipline (due to the prospects for genealization) will continue to be done by university faculty members. The locality specific information needs will mostly be ignored. Extension staff have been sensitive to these needs, and techniques have been developed which will provide for the development of the necessary information.[3] However, due to the personnel shortages, as well as the lack of firm continuing administrative support at all levels for rural development activities, the need can not be adequately served.

The lack of emphasis on rural development research is not difficult to understand. When placed in competition with the other program missions of the Colleges of Agriculture, rural development often has the lowest priority. There are several reasons. As noted earlier, this is often considered "high risk" research; its "payoff" is often questionable, the research itself is often costly, and often requires a great deal of time. Another reason is that rural development in the Land-Grant system does not have the organized constituency that other program areas enjoy.

How can these problems be effectively addressed? The funding for section 603 of the RDA-72, provided for the first time this year, is perhaps one way of encouraging research in rural development which is applicable and useful. However, the funding is insufficient to have much impact, and the criteria for gaining access to these funds will not allow many crucial needs to be met. Again, greater accountability for existing funding can be demanded by Federal agencies in a manner that will raise the priority ranking of rural development. Present Title V funding could be arranged to support locality specific research needs identified by local rural communities rather than university researchers. Other similar procedures could be established, that would increase the emphasis placed on rural development research and insure relevance and utility.

Many rural development strategies presently go unexplored. Most of these fall in a category which might be labelled "alternatives" or "nontraditional." Such approaches would include worker self-managed enterprises, alternative housing, individual or cluster water supplies or waste water treatment facilities managed centrally, and health maintenance organizations among others. Such innovative approaches are regarded skeptically by rural communities.

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[3] Attachments 1 and 2 represent examples of the type of locality specific rural development research and its results in which the Kentucky Cooperative Extension is involved.

We already know how difficult it is to secure individual adoption of innovative technologies; it is even more difficult to secure community acceptance for social innovations!

Here too, the [illegible] approach is, in my opinion, locality specific research. Such research could explore community attitudes and knowledge about potential social changes, determine probably acceptance, and monitor adoption factors during the early years of the innovation. However, the constraints mentioned above still apply, and the least costly manner of support is general program funding rather than individual project funding.

In closing, let me say that I fully support the intentions of this Senate committee as expressed in the scheduling of these hearings despite the qualifications I listed initially. I sincerely appreciate the opportunity to present my ideas to this body and to submit them to your consideration.

ATTACHMENT 1

ISSUES FACING JESSAMINE COUNTY

Traffic in downtown Nicholasville and on Highway 27 are seen as the most important community problems in Jessamine county, according to a representative sample of county residents. Educational services rank second, health facilities and services are third, sewage treatment fourth, and recreational programs fifth. Further down the list are fire protection, water services, garbage collection, economic development and housing. In addition, the survey finds a high level of community support for more effective planning and zoning, especially as they relate to future industrial or residential development. Citizens are also quite concerned about the implications of population growth.

The ten problem areas were identified by 640 households in Jessamine county through a survey of residents' opinions on community problems, government spending and vital issues facing Jessamine county. The purpose of the study is to provide local government officials with accurate information about the needs and wishes of Jessamine county residents regarding government policies and services. The survey was conducted during the months of June and July* by the University of Kentucky, Department of Sociology, in cooperation with the county Planning Commission. The survey was directed by Lorraine E. Garkovich, Paul D. Warner, and Barbara Wakefield, sociologists with the University of Kentucky, College of Agriculture.

TRAFFIC

The flow of traffic within Jessamine county or to neighboring communities is seen as the most serious problem facing the county. Using the common education grading system of A (excellent), B (good), C (average), D (poor), and F (failure), over eighty percent of the respondents rank the quality of traffic flow as "D" or "F". As a result, more than three-quarters of the citizens would be willing to pay more taxes for a solution to this problem. The construction of an expressway to Lexington and a by-pass around Nicholasville are viewed as acceptable solutions for two-thirds of the responding citizens.

EDUCATION

Recent growth in the Jessamine county population has increased the pressures on school facilities and programs. As a result, nearly one third of the respondents grade the adequacy of the educational services as "D" or "F". While a large number of respondents are willing to pay more taxes to improve the school system, others echo the feelings of one citizen concerned with the effect of population growth on the ability of the community to respond to this problem: "The Board of Education was about 5 years too late showing concern about new home construction, which resulted in an overpopulation of the schools." For many citizens, current problems of overcrowding in the school system can be linked to the surge in housing construction and its accompanying population growth.

HEALTH

There is considerable concern over the apparent lack of health services in Jessamine county. Nearly one-half of the respondents state they seek medical services outside the county, and only one-quarter evaluate the quality of medical care in Jessamine as "A" or "B". There is large support for the establishment of a medical clinic to serve the needs of county residents, even if this would involve higher taxes for the citizens. Despite these problems, there is general public approval of the quality of ambulance services in the community.

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* June–July, 1977.

SEWAGE

Nearly one-half of the citizens rank sewage treatment as a high priority and an overwhelming number (72%) want the government to spend more money to improve this service. One popular suggestion for improving sewage treatment in Nicholasville is the expansion of current facilities.

RECREATIONAL PROGRAMS AND FACILITIES

There is strong community support for the development of organized recreational programs for both youth and adults in the county. The absence of such programs, as parks and playgrounds, results in a grade of "D" or "F" for this community service from over one-half of the respondents. The great majority of citizens select this problem area as one requiring greater financial attention by local government, and place this need for more recreational programs and facilities in the top 5 services they would be willing to support with higher taxes.

THE FUTURE OF JESSAMINE COUNTY

Over two-thirds of the citizens advocate the management of future population growth in Jessamine county. In fact, most would prefer to see the population of the county grow only a limited amount or not at all in the coming years.

While the majority (75%) also agree that industrial development should be restricted to industrial parks, or nonagricultural land, and that the community should participate in decisions on the location of subdivisions, support for zoning restrictions is not as strong (45%). This apparent inconsistency in support for goals (managed growth and development) and the means of attaining them (use of zoning restrictions) may reduce the ability of local government to satisfy the preferences for a "rural" lifestyle expressed by so many of the citizens of Jessamine county.

Below is a listing of the major problem areas identified in this study, the five problem areas citizens are willing to pay more taxes for solving, and the report card for selected community services.

[In percent]

	Importance		
	Low	Medium	High
Major problems facing Jessamine County:			
Impsove traffic on Highway 27	10	15	73
Improve traffic downtown	11	17	71
Expand school programs	8	22	69
Expand health facilities	11	38	50
Expand recreational facilities	16	32	50
Expand sewage treatment	14	33	50

Issues needing more Government expenditures if they are to be solved:
1. Maintenance of roads.
2. Recreational programs and areas.
3. Expand sewage facilities.
4. County medical clinic.
5. Paid fire fighting force.

Issues citizens are willing to pay more taxes to solve:
1. Recreational programs and areas.
2. County medical clinic.
3. Paid fire fighting force.
4. Maintenance of roads.
5. Expand sewage facilities.

[In percent]

Community services report card	Very adequate A or B	Adequate C	Inadequate D or F
Water service	39	40	21
Fire protection	34	48	18
Schools	30	36	34
Shopping areas	29	44	27
Medical care	28	37	35
Law enforcement	23	59	28
Recreational programs and areas	8	24	68
Traffic conditions	2	14	84

ATTACHMENT 2

COMMUNITY DEVELOPMENT IN NORTHEAST KENTUCKY*

Using trained paraprofessionals to gather information and serve as a communication channel and organizational catalyst, the Cooperative Extension Service in Kentucky has assisted many small settlements to improve their quality of life. Supported by Title V or RDA–72 in an amount of $265,000, the efforts of locally organized communities have generated more than $1.5 million in improvements of various kinds.

Encouraging broad participation of leaders in citizens' organizations at the community, county, and area levels is a vital part of all community development efforts. During the year, 900 leaders were involved in leader development training and 125,000 participated in citizen meetings. The leadership training provided through the organized communities were organized affecting 15,401 persons. The projects carried out by these communities included construction of 14 recreational facilities, organization and equipping of five fire departments, construction or renovation of eight community centers, establishment of four water systems, repair of 13 roads and bridges, and establishment of two solid waste disposal systems. The communities also held 139 recreational and social events. In support of the various projects, $45,000 was raised from within the communities, $20,000 was received from local governments, and $1.5 million was generated from other agencies.

NEW YORK STATE COLLEGE OF AGRICULTURE AND LIFE SCIENCES,
CORNELL UNIVERSITY,
DEPARTMENT OF RURAL SOCIOLOGY,
Ithaca, N.Y., April 28, 1978.

Senator PATRICK LEAHY,
Chairperson, Agricultural Research Committee,
U.S. Senate, Washington, D.C.

DEAR SENATOR LEAHY: Thank you very much for your invitation to prepare a short statement on current issues in Rural Development Research for your Hearings of May 4 and 5. There are two issues to which I would like to draw your attention. The first deals with the development of rural versus other types of counties, and the second deals with the integration of agricultural research into rural development problems.

Let us assume for the time being that the definition of development refers to increases in socio-economic resources (including income, education, and occupational skills) and in human and community services available to people in such a way that they feel increasingly better about themselves and the places in which they live. This definition is consistent with the one given in the Rural Development Act of 1972. Under this definition, our indicators of development for the 300 Northeast U.S. counties show that more rural counties are generally becoming better off since 1950, but that other counties are improving at an even faster rate. These findings are documented in various papers connected with our research project, USDA–CSRS NE–89, Community Structure and Quality of Life.

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* Summary from final report, "Employing Indigenous Paraprofessionals To Stimulate Total Rural Development," Lexington, Kentucky: University of Kentucky, College of Agriculture, RD–19, May 1978.

The major question to be asked and answered is, why are the more rural counties falling behind the others even as they are getting better? From our observations, the core of the answer seems to be that the people and governments in the more rural counties do not believe that they should take advantage of federal and state government programs designed to aid them in their development efforts nor are they as well organized as are people in other types of counties to participate in such development programs. Thus, in the "aggregate," people in the more rural counties tend to fall behind those in other types of counties in their efforts to "develop." Although it is not generally recognized, it is true that this slower development apparently means comparatively more poverty, more unemployment, more deprivation, more debilitation, more alienation, and more pathologies of suicide, marital disruptions, infant deaths, and so forth, among people in more rural (at least Northeast) U.S. counties than among people in other types of counties. Moreover, these patterns have persisted for over a century in rural counties despite the popular image of "happy rural people lucky to be living there."

In any case, the rural development problem is not imaginary. Moreover, our data show that those rural counties which do link more directly into funds from federal and state supported development programs also show greater strides in breaking the deprivation patterns of slower development. In other words, our perception is that the development programs provided by federal and state legislation do work if the counties make the efforts to link into them. The biggest problem at present (in the Northeast anyway) is that the rural counties do not have the planning and other organizational capabilities for tapping the linkages.

It is highly probable, therefore, that the next most important thing to happen in order to facilitate rural development in the most rural counties is to create greater professional and political planning capabilities in these localities. Experience and our data have shown that professional planning capabilities can and do impact on a variety of development activities in these localities. Such activities include everything from creating greater opportunities in the economic base of these localities to making available a greater variety and complexity of services to local populations. The professional staff should probably include not only individuals who are familiar with federal and state government programs, but also economists to advise on missed economic opportunities and to perform local feasibility studies, sociologists to assist in forming effective citizens' advisory committees on important public and private services, planners to coordinate the above and project activities into land based facilities, and an overall policy manager to coordinate all of the above activities into a coherent program.

In some instances, professionals with these capabilities can be found in rural localities. Certainly the more urban of the rural counties have numerous individuals charged with such responsibilities. For the most part, however, these individuals seldom have a vision of the possibilities of the outcomes of their work, and they seldom have very highly developed skills in implementing their programs. Few have advanced degrees with highly specialized skills. Most suffer because rural political "climates" do not favor aggressiveness in seeking development strategies and processes. In any instance, rural development professionals might be well-served by In-Service Education Programs which could be organized through the Extension Service in order to maintain and/or increase their skills and capabilities in these mediating efforts between federal and state government programs and the people in their own localities.

In summary regarding prospects of rural development research and extension in the more rural counties, the first fact is that people in rural areas seem to be becoming better off at a slower rate than those in the more urban or metropolitan localities. This fact in itself should be monitored through appropriate research projects for its implications over time and into the future. A second fact is that most federal and state government programs do ameliorate the conditions of life for people in these rural localities—they do actually have their proper effects when and if they are implemented, even if from time to time the programs are not quite as cost effective or cost beneficial as they might be. Again, research monitoring is important to assure the continued effectiveness of these programs, especially as they are implemented in rural areas. A third fact is that these programs are implemented in rural localities with less frequency and intensity than they are in the more urban and metropolitan localities. Much further research is necessary to discover the specific reasons for this failure of rural localities in accessing the federal and state programs. A major hypothesis is that people in rural localities are less sympathetic to the goals of such programs, and they have fewer financial and skill capabilities to produce the expert governmental units necessary to access the programs. Again, more research is necessary in order to document the specific details of this hypothesis. A fourth hypothesis is that it is possible to create the expertise in governmental units in rural localities which have the capability both to access the federal and state programs and to demonstrate to the local populations that such programs are beneficial and not to be eschewed. There is little systematic evidence on this hypothesis in the U.S., although there is cross-cultural evidence that such units can be created and can be successful in implementing differentially high increases in development in even the worst of rural localities. Further research is certainly needed on this aspect of rural development, and once established should be monitored in order to ascertain the continued effectiveness of such organizations. Again, a major conclusion of present research is that more urban, suburban, and metropolitan counties have these development planning and implementation units in place, whereas most rural localities do not, so that the rural localities will "naturally" not be able to take advantage of federal and state programs and of local conditions to develop as fast as the other types of places.

A second major aspect of rural development research deals with the integration of specifically agricultural research and development into rural development processes. USDA and the Land Grant Colleges and Universities have traditionally promulgated much research in support of producing more agricultural product per acre. I believe it is accurate to indicate that this system has produced innovations for food productivity which have consistently surpassed all expectations. For generations, the "farm problem" has centered around not too little productivity per acre, but actually too much productivity per acre in order for all the food produced to be absorbed even by our ever increasing population. Indeed, in the face of the greater productivity, almost one-half of all farmers and nearly one-third of all agricultural land were removed from agriculture each decade for the past three-quarters of a century. Moreover, even those who remained behind in rural localities showed greater poverty and debilitation levels than people in other U.S. localities. The irony of huge agricultural production being located next to some of the worst of our nation's poverty and debilitation is almost too much to bear.

A major issue is that the Land Grant Universities have spent billions in producing the agricultural technology, but have spent next to nothing in analyzing and attempting to change the social and economic systems into which the agricultural technologies are being delivered. One major result is that rich farms get richer faster and poor farmers go out of business—the latter have to leave the land and sell or lease it to the former. But even moreso, certain huge corporations get much richer as they profit through "middleman" processing and distributing operations. Because firms like Kraft, Borden, National Dairy, Swift, Armour, National Biscuit, National Brands, and so forth are large and wealthy to begin with, they can operate in particularly oligopolistic fashion to buy out and then shut down local producers and processors, and then sell their own products through relatively oligopolistic supermarkets in nearly any given area. In some ways, these "efficiencies" do produce lower cost food. But in many ways, they stagger local economies so that people in these local economies are no longer the entrepreneurs which made America great, but the employees of the great corporations: they exist to implement the computerized programs of the corporations at the local level.

Due to this complex of circumstances, many people in many rural localities lose their drive for achievement on their own, become dependent on the great corporations (or government welfare programs), and are "stuck" in their own economic level with very few chances for advancement or with very little opportunity to take advantage of "missed opportunities." Some rural localities then become administered by the great corporations, with the subsequent loss of spirit which comes from being an administered people.

What is missing from agricultural research and which is relevant to rural development research, therefore, is the analysis of how people in rural localities can take advantage of "missed economic opportunities in agriculture." So much of present agricultural research is geared to viewing the individual farm as the primary unit of agricultural activity that whole sets of activities are overlooked—specifically the chain of local producer, selling to local processor, selling to local distributors, selling to local people. Most agricultural research is geared to studying productivity within specific crop products—milk per cow, wheat per acre, corn per acre, soybeans per acre, etc. Little attention is paid to the mix of agricultural products which is optimal or even economically possible in any given locality. Most localities can support some local vegetable farms, dairy farms, orchards, and so forth, but analyses of the types and numbers of such farms are lacking.

The scenario seems to be that one of the big corporations goes through a given locality, buying up and then shutting down locally owned processing plants, requiring farmers who formerly used these plants either to stop farming in certain products or to ship their products elsewhere for processing. With changing costs in certain factors of production (land, labor, capital, and transportation), however, it often becomes economically feasible at a later time for local entrepreneurs to reopen certain types of processing and distributing facilities in some localities which could sucessfully compete even with the giant corporations (assuming the giant corporations do not engage in differential regional price-cutting, and so forth). USDA and Land Grant University research, however, seldom includes components which give specific attention to such "agricultural mixes for localities," even when the formal technology for such research within departments of agricultural economics certainly exists.

If rural localities are to be revitalized with the "rural American spirit" of self-confidence, self-sufficiency, and self-fulfillment, it seems evident that some types of research along these lines should be undertaken and the results widely disseminated to local people. Market forces at both the national and local levels are now so complex that it is hardly possible for any given entrepreneur to have the technical expertise to understand, no less monitor, the problems and processes. Local rural entrepreneurs do need assistance from technical economic experts who often already exist in the Agricultural System but who at present are not paying attention to these problems at a theoretical level nor in terms of delivering information to appropriate individuals and organizations through the Extension Service. Thus, some potentially important opportunities for further rural development (in jobs, income, and variety of local products available) are missed by a great number of people in rural localities.

In conclusion, I believe it is apparent from my remarks that resolutions of rural development problems are central if people in rural areas are to overcome their present conditions of being comparatively increasingly worse off even as they become better off on most of the indicators which most Americans believe constitute the "good life." The unevenness or inequality of development in rural localities is a serious problem in the U.S. It is particularly serious because some research has indicated the nature of the problems, so that directions for amelioration of the conditions are reasonably clear. Research is necessary in order to monitor the conditions, as well as to continually check the major hypotheses of what can be done to ameliorate the conditions, in order to assure that the more effective programs are being implemented. Part of the problem deals with the integration of agricultural research into rural development programs. Part of the problem stems from the inefficacies of people in rural localities to utilize appropriate federal and state government programs and/or to take advantage of missed opportunities in local conditions. In general, the better-off localities utilize such programs much more effectively than the worse-off localities, so that present inequities are exacerbated rather than ameliorated by federal and state programs. It seems that to produce greater capabilities for accessing and implementing governmental and entrepreneurial efforts in the most deprived rural localities in order to assist them in their efforts to keep up with the development of more advanced localities may be a major direction that future research and substantive programs at the federal level may want to pursue.

Thank you for giving me the opportunity to communicate these things to you.

Sincerely yours,

PAUL R. EBERTS,
Associate Professor.

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[From the Massachusetts Selectman, Autumn 1977]

SMALL IS BEAUTIFUL * * * OR IS IT?

(By Barton D. Russell)

As one of the workshops at the Annual Meeting made clear, small towns often have the same problems as larger communities, yet do not receive the same attention from state agencies. In this article, Barton D. Russell points out that a similar problem exists on the federal level, where communities under 50,000 are not eligible for certain HUD development funds. Mr. Russell is Executive Director of the National Association of Towns and Townships, an organization devoted to promoting the interests of smaller communities nationwide. A graduate of the University of Connecticut with a degree in Economics, Mr. Russell was named an Outstanding Young Man of America in 1976.

As renowned author Dr. E. F. Schumacker put it, "small is beautiful". In fact, that was the title of his internationally best-selling book. However, to some Washington leaders, "small" is not viewed positively at all.

Most national policymakers define a "small" community as one which is less than 50,000 in population. Some Federal officials have gone even further and decided that a township of under 100,000 people is "small". In certain instances, the figure used to characterize a "small" town is still more remarkable. The Department of Transportation, for example, released a report last year entitled *Small City Transit*, which used a population of 200,000 to distinguish "small" towns and cities from other, larger localities.

On the surface, it may not seem particularly important that figures such as these are found in many Federal laws, regulations, and reports. The fact is, however, that the population figure which Congress and Federal agencies decide to use to define a "small" community can be very significant, perhaps even critical, to the needs and concerns of townships. This is because once a figure is established (be it 50,000 or 200,000), it is usually used to determine which towns are *NOT* eligible to participate in certain Federal programs. If, for example, a 50,000 population limit is established to determine which communities are eligible for HUD entitlement Community Development funds (which, in this case, is the limit), all communities with a population of 49,999 or less are excluded from the program—even though they may have comprehensive community development needs which, as with the New Yorks and Philadelphias, they cannot afford to finance alone.

The town of Arlington, Massachusetts recently discovered the significance of such cut-offs. When the Census Bureau projected that Arlington's population had fallen below 50,000, Town Manager Donald Marquis knew what could happen. In terms of Community Development Block Grants alone, the town stood to lose over $1 million annually. This otherwise inconsequential decline of people living within Arlington's boundaries could have affected its eligibility for certain other Federal programs as well. Fortunately, an amendment to the just-signed CDBG legislation saved this community and others like it from losing its status as an "entitlement" town. If Arlington had not been saved by this special amendment, it could have *competed* with other towns for the much more limited development assistance which will be made available through the new HUD Small Towns Program. But chances are that, even if its application were approved, Arlington's community development plan would have been funded at a much lower rate. Clearly, the loss of population this township experienced did not alter its degree of need. Yet, because of the size distinctions made by Congress in the form of population cut-offs, smaller communities are automatically given lower class status.

From all the attention which Congress, the White House, and the media give to the big cities, one might think that the vast majority of Americans live within the boundaries of such metropolitan centers. A look at figures provided by the 1972 Census of Governments indicates that nothing could be further from the truth. Of the 35,508 townships and cities which have been identified by the Census Bureau, only 180 represent communities over 100,000 in population. Another 298 communities are between 99,000-50,000 in size. Thus, out of a total of over 35,000 general local governments, not even 500 have a population in excess of 100,000. In terms of people, what does this mean? According to the Census Bureau's 1976 Statistical Abstract, a startling 63% of all Americans live in so-called "small" communities, below 50,000 in population.

A variety of rationales has been offered to explain Washington's myopic concern with the problems of the big cities. Some say that megalopolis areas are going bankrupt, that their "walls" are crumbling, and that they need immediate relief. There is no doubt that problems exist which deserve serious attention. However, is it in the national interest to ignore the very real difficulties faced by many smaller communities in order to "save the big cities?"

Congressman Henry Reuss of Wisconsin, Chairman of the powerful Banking, Currency and Housing Committee and its Subcommittee on the City, is not satisfied with just cutting off communities below a certain population level from Federal aid. Mr. Reuss is a proponent of big government, and supports the consolidation of smaller local governments, again in the name of efficiency. He feels that making "small" towns eligible for Federal assistance programs is akin to "throwing good money after bad," and that the bigger cities are, by nature, the best providers of public services. His actions, while well-intentioned, are based upon some very narrow premises which overlook, among other things, the good quality of life many associate with smaller communities, as well as the documented deficiencies of large bureaucracies.

His misconceptions would not be of much consequence if he were merely one man with an opinion on the matter. However, Congressman Reuss is a very influential Federal policymaker, as evidenced by the private audience he was given recently with the President to promote the creation of an urban development bank and other big city projects. Although President Carter is from a small community, there is every indication that he will support programs like those promoted by Reuss, which are designed to benefit big cities exclusively. After all, as has been said so often about Washington policymaking, "the squeaky wheel gets the grease". Because they are usually not as well staffed and financed as the larger cities, small towns rarely squeak effectively enough to get even the smell of "grease".

Few will quarrel with the notion that Americans should be able to choose from a wide variety of places to live; and certainly life in a healthy and safe big city should continue to be an option. But, as the data collected by the Bureau of the Census clearly shows, the *majority* of U.S. citizens *choose* to live in what the Feds call "small town America", and it too should be supported and vitalized. Continuing dominance of the intergovernmental policymaking process by "big is best" thinkers, however, may eventually send our many small communities the way of the dinosaur, and the quality of life offered by such towns would be eliminated from the realm of choices Americans now have.

In the future, all major Federal policies related to local government should be examined to determine their effect on the small townships and cities in this country. The upcoming White House Conference on Balanced National Growth and Economic Development would be a good place to establish such an ongoing focus. If the Federal push towards urbanization continues unchecked, community life as many now know it will become radically different, and I am not sure it will be an improvement.

STATEMENT OF STANLEY ZIMMERMAN, EXECUTIVE DIRECTOR, NATIONAL DEMONSTRATION WATER PROJECT

National Demonstration Water Project (NDWP) is a research and development program funded primarily by the U.S. Community Services Administration. Its objective for the six years of its existence has been to bring about necessary reforms in the national system for delivery of water and sewer services to rural residents, particularly low-income families. In structure, NDWP is a coalition of local organizations located in all parts of the United States but united as a network through a board of directors and a national staff in order to work toward that common objective. We are pleased that we have been asked to present a statement to this Subcommittee, and we believe that the sharing of our field experience with others will help the Subcommittee achieve its purposes in these hearings.

As expressed in the chairman's letter to NDWP of April 19, 1978, the Subcommittee is examining the status of non-farm rural development research within USDA and the state land grant system and the applicability and availability of the research to rural people, communities, and institutions. NDWP readily acknowledges the tremendous contribution to rural America that has been made by research at USDA, such as that of the Economic Research Service and the Rural Development Service, and of the many universities that make up the state land grant system. We believe that Congressional support for this research should continue and even be increased.

However, we do not believe that a single research approach can meet the needs of rural people, particularly non-farm people. Past USDA-sponsored research has, indeed, been heavily farm-oriented. In addition, questions of technology have been explored far more than policy questions. There is a great need for research that addresses policy and programmatic issues relating to rural residents. The problems of non-farm rural people are usually not technical but institutional in nature. They often lack basic services—such as adequate housing, water and sewer facilities, and transportation—not because the technology for delivering these services is unavailable but because the institutions that make up the delivery system do not function as well as they should for rural people. Research to evaluate policies, to demonstrate successful management models, and to test program techniques is badly needed. This kind of research can be more readily translated into policies that benefit rural people than technical research, although the continuation of the latter is obviously important.

Such research can be funded through the same legislative mandate that is often used now to fund land grant university research if additional appropriations are provided.

We are thinking specifically of Section 603(b)(4) of the Rural Development Act of 1972, which directs the Secretary of Agriculture, in the language of a guide to the legislation prepared in 1976, to "initiate or expand research and development efforts related to solution of problems of rural water supply, rural sewage and solid waste management, rural housing, and rural industrialization." [*] The Congressional mandate enuniciated in this Section has never been adequately implemented because the Secretary has never had sufficient financial resources to carry out an innovative and viable rural research and development effort. We believe that the Congress can better achieve the purpose of the Section by providing to the Secretary at least ten million dollars annually for research and development projects.

These funds should be used to provide grants to organizations that propose innovative and viable rural projects that appear likely to help improve the means generally by which the Department of Agriculture and other government programs are directed at the solution of the rural problems identified by Section 603(b)(4) of the Rural Development Act.

The use of funds for research and demonstration projects is important to the federal approach to problem-solving, program development and program monitoring, and to the role of the Department of Agriculture in the federal rural development effort. Funds are available for this purpose under programs of such agencies as the Department of Housing and Urban Development, the Economic Development Administration of the Department of Commerce, and the Department of Labor. However, these agencies have become increasingly urban in their orientation. The result is that organizations working to justify and improve *urban* programs have access to funds, while those devoted to *rural* causes do not, except as they are able to obtain ad hoc assistance from a variety of federal agencies. Congress needs to reverse this trend.

A program for this purpose should become a permanent part of the Farm and Rural Development Administration, the successor of the Farmers Home Administration, which now includes the Rural Development Policy, Management and Coordination unit. As such it would augment in-house efforts of this agency for policy development, policy coordination and training. The administrative costs involved in conducting such a program in this context would be nominal and more than offset by the results that could be achieved through the direct involvement of organizations concerned with rural causes in the overall effort to identify and solve the special problems of service to rural areas that are identified by Section 603(b)(4) of the Rural Development Act.

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[*] *1976 Revised Guide to the Rural Development Act of 1972*. Prepared for the Subcommittee on Rural Development of the Committee on Agriculture and Forestry, United States Senate, 94th Congress, 2nd Sess., March 15, 1976, p. 37.

Research and demonstration projects of importance to FmHA should involve a combination of innovative service approaches and proposed policy and program changes where such efforts are needed to improve the productivity of primary federal programs, to provide more effective means of combining federal efforts with the efforts of state and local governments, or to reach portions of the rural population that are difficult to serve under primary programs as they are presently established. National Demonstration Water Project provides a good example of this approach in the area of rural water and sewer services. NDWP, with considerable success, has focused on the special problems of areas with widely dispersed residents and small communities involving large numbers of low-income families. Under the control of a network of local organizations, NDWP has sought to combine model service activities with policy reform undertakings to improve nationally the means by which these rural people are able to obtain water and sewer services at reasonable prices they can afford to pay. With good results over the years it has addressed a series of specific problems that prevented a limited service to these people, identified the options for improving the service that is needed and helped cause changes to take place in federal, state and local efforts that would better meet the needs of this population.

It should be noted, in considering a program for research and development projects at the Department of Agriculture, that the changes brought about by NDWP did not require huge outlays of funds by the federal government. Rather, most of the reforms involved more productive use of available funds for this portion of the rural population as intended by the primary programs of the federal government that were involved. Curing all the ills of rural America is doubtlessly a matter involving billions of dollars, but making available government resources more useful to rural residents is not.

It is important to rural America that the Congress provide adequate funding for research and development projects under Section 603. Field-based rural development organizations, present and future, may soon have no place else to go for funding. Section 603 of the Rural Development Act calls upon the Secretary of Agriculture to carry out a national rural development program. Ten million dollars for research and development projects would bring this program to life and give the Secretary an opportunity to institute a program which would upgrade the design and implementation of rural development efforts at each level of government—federal, state, and local.

NDWP has recently published a book, financed through an EPA grant, entitled *Drinking Water Supplies in Rural America*. This book amply documents the fact that millions of rural people have domestic water supply problems. We know through our other work that the wastewater problems are even more severe. And our contact with groups working in other areas of concern, such as housing and economic development, has made us aware that significant problems exist in these areas too. We urge the Congress to assist in the solution of these problems through the legislation action we have proposed here.

UNIVERSITY OF FLORIDA,
FOOD AND RESOURCE ECONOMICS DEPARTMENT,
Gainesville, Fla., May 1, 1978.

Hon. PATRICK J. LEAHY,
U.S. Senate,
Russell Senate Office Building, Washington, D.C.

DEAR SENATOR LEAHY: Enclosed please find my prepared comments for the hearings to be held on the status of non-farm rural development research by the Agricultural Research and General Legislation Subcommittee of the Senate Committee on Agriculture, Nutrition, and Forestry. I very much appreciate being afforded the opportunity to make comments on this topic and hope that what I have said contributes in a positive manner to the deliberations of your subcommittee.

If I can be of any further assistance please feel free to call on me.

Sincerely,

KENNETH C. CLAYTON,
Assistant Professor.

Enclosure.

STATEMENT OF KENNETH C. CLAYTON, ASSISTANT PROFESSOR, FOOD AND RESOURCE ECONOMICS DEPARTMENT, UNIVERSITY OF FLORIDA, GAINESVILLE, FLA.

I welcome the opportunity to comment on the status of non-farm rural development research within USDA and the State Land Grant System. My observations will pertain largely to the Land Grant System since I am most familiar with that end of the spectrum.

Let me begin with the matter of defining Rural Development. While I do not propose to provide such a definition there are several considerations which ought to underlie any such effort. First, a broad, general definition, while adequate for political or administrative purposes, is largely ineffectual for research/extension use. Statements such as "improving the economic and social well-being or quality of life of rural residents" do little to identify rural needs. Likewise, the failure to incorporate specifics contributes nothing to a research/extension taxonomy. An operational definition of Rural Development is needed that captures rural concerns and puts them into a workable research/extension framework. I realize that being too specific may unduly handcuff USDA and Land Grant personnel, however, the trade-off in flexibility for a usable definition ought to be evaluated.

In working with the Current Research Information System (CRIS) it has become apparent that a considerable lag is involved between the time Rural Development Research is conducted and the time of its reporting via CRIS. Although the current hearings are not directed at the CRIS process, per se, perhaps something could be done to improve its performance. I recognize that researchers in the Land Grant System are not as prompt in their reporting as they could be and that the CRIS system has certain time rigidities built-in which account for the information delay. Yet, it would seem that some sort of clearing house for Rural Development research/extension work could be conceived and maintained to great mutual advantage. Perhaps a researcher and/or topical index could be created. Someone within USDA or perhaps at the National Rural Development Center could be responsible for updating the index. It might also be appropriate to identify researchers and others at non-Land Grant schools conducting Rural Development research.

On the matter of the role of the Rural Development Service in setting research priorities within USDA and Land Grant Institutions, I would make the following observations. Although categories of Rural Development research may be common across all states and nationally, the particular emphasis within a problem area as well as between problem areas is likely to differ. For example, public services research may be most critical in the midwest while coping with growth may be of highest priority in the Sunbelt states. I am not convinced that a centralized priority system makes greatest sense in this instance. At the same time, there will, no doubt, be problems common to all states that USDA would be in a good position to identify, either conducting needed research itself or encouraging representative states to do so.

As an aside, at this point, I would be most interested in the role envisioned for the Rural Development Service once it has been combined with the action-oriented Farmers Home Administration? Will this affect the types of priorities it would identify? Also, where does the Economic Development Division of ESCS fit into the USDA schema for Rural Development research?

The issue of coordinating Rural Development research among federal agencies is important although I suspect that may be as much a political question as it is substantive. Certainly at the state level this sometimes becomes the case as we attempt the dissemination of results. The large number of state and federal-thru-state programs that are directed to rural areas, but administered by other agencies, sometimes places Land Grant personnel in a competitive position. We have found, however, that communication between agencies reduces friction and quite often fosters cooperation. In fact, a more interesting question emerges at the state level as to how much research back-up Land Grant institutions can provide so that local areas may participate more effectively in the programs of other agencies. For example: what sorts of health care delivery research can be done to facilitate health care planning efforts? What are the system alternatives for rural public services that might be funded via a Federal program?

In examining research priorities for USDA and the Land Grant System it would seem that considerable emphasis has been placed on the so-called "small farms" problem set. In at least certain instances I would expect that this has occurred at the expense of non-farm, non-food and fiber rural development research. I have no particular quarrel with the small farms program. It does deal with subject matter that is more generally in line with traditional USDA/Land Grant agricultural programming. I would hasten to point out, however, that it does deal with only a part of those who live in rural areas and with only a portion of the rural development problem. To the extent that small farms never become more than subsistence or part-time endeavors it is particularly important that questions such as rural industrialization be addressed. Also, in those states experiencing rapid population growth it is often the small communities, as a whole, that are most in need of assistance.

Although it may be a cyclical phenomenon, I think it fair to observe that there has been a swing in Land Grant institutions back to the agricultural basics—farm management/production agriculture, marketing and demand analysis. I am not sure to what extent this mirrors or has affected USDA research. If it is cyclical it would suggest an unevenness in the flow of Rural Development research to local communities. Perhaps some type of countercyclical effort at the national level would be appropriate. I do not believe this should necessarily be in the form of a restriction on traditional agricultural work, but it might take the form of a discretionary incentive available through USDA for Rural Development efforts.

As a brief observation on projections for rural development research I would suggest that efforts by the current national administration to promote state and local responsibility for program design and implementation implies greater rural development involvement by the USDA/Land Grant System. The study of alternatives for various Rural Development-related programs as well as mechanisms for monitoring on-going efforts is going to become increasingly critical.

Finally, on the matter of dissemination of Rural Development research results let me offer a few observations. Although variation exists between the states, a considerable amount of "hands-on" Rural Development work has focused on organizing communities, identifying leaders, and so forth. Much of our Rural Development research, on the other hand, has lacked in application. Part of the problem has been a detachment by researchers from the clientele they are serving. Also to blame has been the failure of Extension personnel to improve the decision-making capabilities of rural clientele groups. It is my belief that the researcher must interact with his client groups. Moreover, simply delivering research results without developing the decision-making capabilities of local leaders is likely to prove fruitless. This same type of problem is emerging in the several states where increasingly sophisticated clientele groups are emerging. We, in Florida, for example, are having increasing contact with local and regional planners who deal with Rural Development issues. These fellow professionals are looking for subject matter expertise from economists, sociologists, and others in the Land Grant System. As we provide them data and tools it becomes apparent that they, too, are in need of help in utilizing these inputs to the decision-process with which they are involved. The lesson in all this, I believe, is that close coordination between research and extension is critical. Several states have recognized this, by appointing faculty with joint research/extension appointments. While I am not sure that this type of arrangement applies in an analagous fashion to USDA Rural Development efforts, it might be an organizational arrangement worthy of consideration.

UNIVERSITY OF ARKANSAS,
COOPERATIVE EXTENSION SERVICE,
Little Rock, Ark., May 2, 1978.

Hon. PATRICK J. LEAHY,
U.S. Senator, U.S. Senate, Committee on Agriculture, Nutrition, and Forestry, Russell Senate Office Building, Washington, D.C.

DEAR SENATOR LEAHY: I appreciate your letter of invitation to comment on the hearings that you are conducting relating to the status of non-farm rural development research within USDA and the State Land Grant System.

Our major thrust in health education in the Cooperative Extension Service in our state is in the area of lifestyle change directed primarily toward a cross section of our population. Our audiences are made up of volunteers from all walks of life within the community.

We are also very much interested in health care services being provided in the rural areas. Working through our county Extension staffs and their community development specialists, and the Dean and staff of the College of Medicine, University of Arkansas for Medical Sciences Campus, we are attempting to establish stronger communications with community leaders to assist them in attracting and holding additional family practitioners in rural communities where there is a shortage of doctors.

We conduct health education activities on a wide range of concerns. I feel that we are not in a position to respond directly to the subject of your hearing. However, I sincerely appreciate your invitation.

Sincerely yours,

RUNYAN DEERE,
State Leader—Health Education.

DELAWARE COOPERATIVE EXTENSION SERVICE,
UNIVERSITY OF DELAWARE COLLEGE OF AGRICULTURAL SCIENCES,
Georgetown, Del., May 3, 1978.

Re Nonfarm Rural Development Research.

Hon. PATRICK J. LEAHY,
Russell Senate Office Building,
Washington, D.C.

DEAR SENATOR LEAHY: Thank you for the invitation and opportunity to submit testimonial material to your Subcommittee.

Please find enclosed letters of endorsement of Delaware's Title V, Rural Development Act of 1972 activities from our Congressional delegation and affected towns.

As you will note from the enclosures, the Delaware Title V Project has successfully brought together research and extension to help solve local problems.

Please feel free to contact any of the enclosed parties for further information.

I have already supplied information to Dave Clavelle during a recent phone conversation and will also submit written information by next week.

Thank you once again for the opportunity—and feel free to call on me if the need arises.

Respectfully,

DANIEL S. KUENNEN,
Area Agent, Community Resource Development.

Enclosures

THE STATE OF DELAWARE TITLE V PROGRAM—OVERVIEW

Delaware's Title V program was initiated by a core staff from the Department of Agriculture and Food Economics and the Extension Community Resource Development program at the University of Delaware in Newark. A University Advisory Council, created specifically for Title V, did the initial planning. The Council selected the town of Laurel in southern Delaware as the geographic target area because it was a "traditional/agricultural" town and therefore economically representative of most of the rural towns in the state.

Operating with very limited funding, the Title V personnel managed to provide many services to the residents of the target area. By incorporating and coordinating the aid of federal, state and local agencies, Title V personnel brought more than $3 million to bear upon the rural development projects in the state. Four of the seven community service projects utilized funds from the Economic Development Administration, Housing and Urban Development, and Soil Conservation Service, providing Laurel with an elevated storage tank, a 39-unit mobile home park for low income minority residents, a recreational park, and a permanent building for a State Service Center. From the outset, the town government of Laurel acted as the local advisory committee and participated in each of the projects.

The remaining three community service projects involved not capital improvements but administrative improvements. Because the Laurel area was receiving grants and outside funding for their rural development projects, it became necessary to increase the administrative capacity of its town government. Title V staff provided the necessary data and management plans and contributed various alternative choices. A reorganization of the town government created an assistant town manager position, allowing the town manager to spend more time on federal grant administration. Spurred by several agencies concerned with law enforcement, one Title V project sought to provide the local police department with new direction and procedures for better management. Lastly, Title V personnel recommended the revival of the planning commission and suggested ways to revise the town comprehensive plan.

Two projects sought to improve employment and business opportunities in Laurel. With encouragement and educational assistance from Title V, town officials and the local Chambers of Commerce are now preparing a grant application for revitalizing the downtown business district. Title V also helped the town secure federal funding to provide construction jobs for minority residents.

The momentum created by the success of the town of Laurel's projects carried over into Title V program involvement with other communities in southern Delaware. Title V personnel working with the town government of Millsboro, Delaware and the Millsboro Housing for Progress Organization secured a community development grant for $190,000 from the Department of Housing and Urban Development. Millsboro community development grant funds are being utilized to provide public works and site improvements during the construction of a 78-unit low-income rental housing project.

Additional Title V assistance to the town of Millsboro was instrumental in the funding of a program designed to improve the town's public works systems. A grant for approximately $700,000 was awarded by the Economic Administration and it is currently being utilized in the improvement of the town's water supply and sewer systems.

The Community Development Project Director of Blades, Delaware and Title V personnel secured a grant for $245,000 from the Department of Housing and Urban Development to help fund a housing code enforcement and housing rehabilitation grant-loan program.

Due in part to the positive publicity surrounding the town of Blades' Housing Rehabilitation Grant Program, the town was selected by the Federal Energy Administration as the pilot municipality for Project Conserve in the State of Delaware. This program provided funds to conduct a house-by-house energy conservation survey throughout the towns' 244 housing units.

The information gathered from this survey was run through a computer program developed by the Federal Energy Administration and the homeowner or renter received a print-out indicating the dollar savings which would be generated by making the house more fuel efficient. This print-out also indicated a cost comparison of the needed housing energy conservation improvements with the cost of heating the home if it was left in its present condition.

Title V personnel are currently assisting the town manager of Delmar, Delaware in the application to the Department of Housing and Urban Development for a Community Development Block grant for $200,000. This grant will be utilized to improve living conditions in a low to moderate income neighborhood located in Northwest Delmar.

Title V personnel are assisting the town of Frankford, Delaware in the application to the Department of Housing and Urban Development for a Community Development Block Small Cities Single Purpose Grant of $200,000 to fund improvements to the town's water supply system. The program will have substantial impact on low/moderate income persons for water consumption and fire protection capacity.

Title V personnel have successfully concluded arrangements with the coastal beach communities of Bethany Beach and the town of South Bethany, Delaware, to assist in the review and revision of the town's existing comprehensive plans. Negotiations are in progress with the College of Agriculture, University of Delaware to coordinate research extension resources in the areas of survey work and supporting data interpretation.

Research personnel will work with Title V extension agents to collect and interpret the data needed to revise the comprehensive plans and a research paper will be issued based on the successful completion of the comprehensive planning by the coastal communities.

Throughout the Delaware Program, Title V extension personnel have prepared a number of publications on "town capacity building" projects that may be of value to other small towns.

Copies of Personnel Management Guidelines for the towns of Millsboro and Delmar, Delaware, Police Management Guidelines for Laurel, Delaware, Police Management Guidelines for Rural Communities, Management Guide for Municipal Low/Moderate Income Rental Mobile Home Parks and the Parks Management Guide for Rural Communities are currently on file and readily accessible to all interested parties.

In addition, Title V personnel, with assistance from concerned beach community residents and local officials, have compiled a research paper to respond to The University of Delaware's College of Marine Studies report: *Sea Grant Looks at Beach Management.* The paper was sent to the Director of the College of Marine Studies in response to his request to critique the sea grant papers treatment of the beach erosion problems of coastal Delaware and the effects on beach communities. It is also being widely circulated to interested parties.

Title V personnel are currently negotiating with the University of Delaware's College of Marine Studies to sponsor workshops for local communities to increase citizen awareness, input and participation at future state sponsored public hearings and proceedings associated with the state office of management, budget and plannings formulation of a coastal zone management plan.

Title V funding—$21,088 per year (Research and Extension combined).

U.S. SENATE,
Washington, D.C., March 15, 1978.

Mr. DANIEL S. KUENNEN,
Community Resource Development,
Sussex County Office,
Georgetown, Del.

DEAR MR. KUENNEN: Thank you for your letter about the Extension Service funds under Title V of the Rural Development Act of 1972.

I understand your disappointment with the recent decision to cut funds for your program. It has certainly been a worthwhile one for Delawareans. During the past week, our office has been trying to determine how monies can be secured for the continuation of your program.

We contacted the Appropriations Committee and were given details of the new method of distributing funds for programs like yours. Apparently, the new procedure is to eliminate all earmarked funds. The Extension Service was not singled out; all organizations receiving earmarked money have lost their funding. Hopefully, Congress will prevail and vote back into the budget money for programs like the ones in Delaware.

If Congress chooses not to follow the President's budget recommendation, it is my understanding that the Extension Service could still receive up to $7 million (the Agriculture Committee's recommendation) in fiscal 1979. The new plan is to distribute it through the states. Each state government would decide how to appropriate its money. Assuming Delaware gets its share of the money expected to be apportioned nationally, you would have to apply for that money through the state government. I am sure you know the procedure better than I, but if we can be of any help to you, please let us know.

Let me add that I am still working through the appropriate Senate committees to secure a grant under Title V in Delaware. Thanks again for writing and for keeping me informed of your efforts to win money from the Extension Service.

Sincerely,

JOSEPH R. BIDEN, JR.,
U.S. Senator.

U.S. SENATE,
Washington, D.C., March 24, 1978.

Mr. DANIEL S. KUENNEN,
Area Agent, Community Resource Development, Kent and Sussex Counties, Delaware Cooperative Extension Service, University of Delaware College of Agricultural Sciences, Georgetown, Del.

DEAR MR. KUENNEN: Thank you for your recent letter regarding the elimination of funds in the President's budget for Title V of the Rural Development Act of 1972 for the extension of community development programs.

The Senate Subcommittee on Agriculture of the Senate Appropriations Committee is currently holding hearings on appropriations for the Rural Development Act. There is strong sentiment in this committee to restore funding for this program. Additionally, the Senate Committee on Agriculture recommended in its report of March 15 to the Budget Committee that full funding be restored for Rural Development Programs.

I am supportive of the fine work being done in Delaware in the area of rural development.

Sincerely,

WILLIAM V. ROTH, JR.,
U.S. Senate.

CONGRESS OF THE UNITED STATES,
HOUSE OF REPRESENTATIVES,
Washington, D.C., March 30, 1978.

Mr. DANIEL S. KUENNEN,
Area Agent, Community Resource Development, Delaware Cooperative Extension Service, University of Delaware Substation, Georgetown, Del.

DEAR MR. KUENNEN: Thank you for your recent letter regarding funding for Title V of the Rural Development Act of 1972. I share your concern about the continuation of this program.

Delaware has greatly benefited by the fine efforts of the Delaware Cooperative Extension Service under Title V funding. Enclosed you will find a letter which I have written to the appropriate Subcommittee Chairmen expressing my feelings. You can be assured that I will continue to closely watch this matter.

With kindest regards,

Sincerely,

THOMAS B. EVANS, JR.,
Member of Congress.

MARCH 21, 1978.

Dr. SAMUEL QUINN,
Agriculture Hall,
University of Delaware,
Newark, Del.

DEAR DR. QUINN: I was really sorry to hear the President's Budget did not include funds to continue the Title V Program. I feel it was a decision made without communities like Laurel in mind. We hope someone can point out the true importance of this program and also hope that provisions can be made to keep this Program active.

Mr. Dan Kuennen has done an outstanding service for our community and he will be greatly missed if the Title V Program does not continue.

Please find enclosed copies of letters sent to our congressional representatives. If there is anything we may be able to do to keep this Program active, please advise.

Sincerely,

MAYOR AND COUNCIL OF LAUREL,
RICHARD F. WHALEY,
Town Manager.

MAYOR AND COUNCIL,
Delmar, Del., April 17, 1978.

Congressman THOMAS EVANS,
Wilmington, Del.

DEAR CONGRESSMAN EVANS: We have been advised by the University of Delaware Cooperative Extension Service that President Carter's Budget does not provide funds for Title V of the Rural Development Act of 1972 beyond this year.

This program has been of great help to the Town of Delmar especially in assisting us on federal applications, development of a personnel manual, guidance and information regarding the proposed mall and also, the program was instrumental in my attending National Rural Development Leaders School.

The forementioned programs are just a few of the valued services and assistance we have received through the Rural Development Act. Your assistance would be greatly appreciated in trying to have the program refunded by placing it in the President's Budget.

The two area agents in Kent and Sussex Counties are doing an outstanding job, and we will be at a loss if the program is not refunded.

Very truly yours,

TOWN OF DELMAR, DEL.,
ROBERT WM. MARTIN,
Town Manager.

U.S. DEPARTMENT OF AGRICULTURE,
SCIENCE AND EDUCATION ADMINISTRATION,
RURAL HOUSING RESEARCH UNIT,
Clemson, S.C., April 18, 1978.

Hon. PATRICK J. LEAHY,
U.S. Senate,
Washington, D.C.

DEAR SENATOR LEAHY: I received a letter from you dated April 5, 1978, related to the hearings you have scheduled for May 4 and 5, 1978, for your Subcommittee of the Senate Committee on Agriculture, Nutrition, and Forestry. The subject of the hearings is the "Status of non-farm rural development research within USDA and the State Land-Grant System."

I am the Research Leader for the USDA-SEA Rural Housing Research Unit (RHRU) at Clemson, South Carolina, and Technical Advisor for the USDA-SEA National Research Program (NRP) No. 20690. "Improved Housing for Rural Families and Migrant Workers." In my current role the past four years, I have become increasingly aware of (and disturbed about) the many problems of housing in Rural America, whether they be on farms or non-farms. I shall not elaborate on these because they are indicated in the enclosed document, "ARS National Research Program, NRP No. 20690, Improved Housing for Rural Families and Migrant Workers."

Personally, I feel very comfortable (in our research) with the terms "rural non-farm" and "rural farm". The reason for this is that there is such a small research effort directed to either of these categories—yes, Farmers Home Administration covers both of these categories in their loan program—and, evidently, does a good job of it. My concern (our SEA/RHRU concern) is: What is being done to reduce actual costs of housing for people in either of these categories, other than low-interest loans? Some of our research concerns are:

a. How can rural homes be built cheaper?

b. How can rural people use their own labor, or build a house themselves from adequate self-help plans?

c. How can costs be reduced in rural homes?

d. Can rural homes use solar, wind energy, or other methods to reduce fossil fuel consumption and cost?

e. What alternate methods of waste disposal (alternate to septic tanks that might not work on their land) are available for rural areas?

f. Is the drinking water supply safe and adequate in rural areas, and how can we insure that it is?

I feel that housing in rural areas, whether it be non-farm or farm, has unique aspects that differentiate it from urban housing. Some of these differences are:

a. Many solar, wind, and other alternative energy sources can be utilized in rural areas that would not be accepted (aesthetically or by building codes) in urban areas.

b. There is a need and usefulness for alternative waste disposal systems in the rural areas (both individual homes and communities) that is nonexistent in urban areas.

c. Water supply systems in rural areas are notoriously unhealthy (see attached NRP No. 20690). Such systems, whether for single residences or rural communities, are outside the realm of urban problems.

d. Incentives for rural contracting and building are less in rural areas than urban—contracting and building technology is generally less available and, possibly, more unreliable in rural areas.

There are other differences between urban and rural development and housing, but those listed are important. According to recent figures I obtained from Dr. Ronald Bird of the USDA Economics, Statistics, and Cooperative Services, there are 74 million owner-occupied residences in the United States. Of these, about 18 million are classed as "rural non-farm" and about 2.6 million are classed as "rural farm". I feel, then, that 28 percent of our U.S. homes fall into a category for which potential problems might not be researched in housing agencies outside of the U.S. Department of Agriculture or the State Land-Grant System. I believe that the interest, concern, and expertise within USDA and the State Land-Grant System make both of these logical responsible agencies to research rural housing problems.

Our SEA Rural Housing Research Unit participates in a Regional Research Committee, S-95, that has the title, "Housing for Low and Moderate Income Families." I have attached a copy of a new proposed Regional Project Outline for renewal of this project. This outline indicates past history and accomplishments of this committee, as well as participants. Nine State Land-Grant institutions cooperate in this work, along with two USDA agencies and TVA. This committee provides an excellent basis for cooperative work between USDA and the State Land-Grant System in the solution of housing problems in rural areas. A list of committee members is also enclosed. Some of these members would probably be glad to serve as knowledgeable and interested witnesses for your hearings. Dr. P. Howard Massey, Associate Director of the Virginia Agricultural Experiment Station, is the Administrative Advisor for this Regional Committee.

In regard to the questions suggested in your Hearing Outline, I do not feel that I am in a position to comment properly on these. I believe these questions could be answered better at the policy level of the Department.

For your information, I have enclosed some notes on the current research program of the SEA Rural Housing Research Unit at Clemson, S.C. You can see that we have a rather small research effort aimed at improving housing for Rural America, but I feel it is an effective one. Included with our list of current research efforts is a list of agencies with whom we cooperate. I believe it is this cooperative effort that has made our research unit so effective. Incidentally, models of several low-cost rural homes, developed by our unit, will be on display in the patio of the USDA Administration Building for Sun Day, which is May 3. These represent solar-heated and energy-efficient homes that we have tested, or are now testing, for their applicability to rural housing.

I should like to express my appreciation for the opportunity to comment on a subject that is so extremely important to our many rural citizens, but one that, I feel, receives minimal attention.

Sincerely,

T. E. Bond,
Research Leader, Rural Housing Research.

STATEMENT OF M. RUPERT CUTLER, ASSISTANT SECRETARY FOR CONSERVATION, RESEARCH, AND EDUCATION, U.S. DEPARTMENT OF AGRICULTURE

Mr. Chairman, we appreciate this opportunity to take part in a review of rural development research and extension. As you noted in your letter to Secretary Bergland, such a review is appropriate now that the Food and Agriculture Act of 1977 has been passed.

We agree that the review should be a comprehensive one. It should look at the entire system. We should look at how the problems flow from the users to extension and research. And we should also look at how research findings flow back to extension and users.

In providing this testimony, I shall present an overview of the Department activities with emphasis on the research and extension in the Land-Grant universities. Dr. Kenneth Farrell of the Economics, Statistics, and Cooperatives

Service will describe the efforts of his agency.

Let me now proceed with responding to the Committee's questions, more or less in the order they were asked. Supporting documents and appendices amplify the information requested in Attachment 1 of your letter to Secretary Bergland. I request they be included in the record, along with the full text of my statement.

Mr. Chairman, let me emphasize right at the outset that rural development is a primary USDA commitment—and that non-farm rural research and extension are primary parts of that commitment.

Rural development research and extension come under USDA departmental goals VIII and IX.

Goal VIII aims at raising the living standards of rural Americans. Goal IX aims at promoting local services—employment, health, recreation, and environmental protection.

Under these goals, USDA is committed to providing rural Americans with more employment and investment opportunities, with a higher and more equitably distributed income.

It is committed to conserving resources and abating pollution in rural communities—to generally improving the quality of life in rural America.

From 1970 to 1976 rural development research and extension increased markedly. The number of rural development related research projects increased from 350 to 1,347. The number of scientist years devoted to these projects increased from 73 to 364.1. Federal and State funding rose from $3.9 million to $18.3 million.

For extension, non-farm rural development efforts increased from $23 million in FY 1970 to $54 million in FY 1977. Of this amount approximately $20 million were Federal funds and the balance was provided by State and county funds.

These increases took place through a redirection of funds from other priority areas. For example, beginning in 1971 the rural development centers started in this manner. Each center received initial funding of $75,000 annually from P.L. 89–106 grants.

Such funding redirection typified the growing commitment to rural development research and extension in the late 60's and early 70's.

But this commitment grew not only in quantity—in the number of dollars spent and in the number of projects. It also grew in quality. Projects became more sharply focused on key and critical problems—problems like job creation, income, resource utilization, improvement of service delivery, population growth, environment, and rural housing, to mention just a few.

A stronger base was developed in rural extension, the delivery apparatus of research, and therefore highly important.

The Regional Rural Development Centers played a vital role. They provided a mechanism for supplementing and complementing research efforts of the individual States.

Both P.L. 89–106 and Title V funds supported activities designed to achieve the basic objectives of the Centers. Emerging issues and priorities in rural development were identified. Regional research and extension was strengthened. Inventories and summaries of existing knowledge were completed. Research gaps were identified. The quality and productivity of rural development and extension was increased.

CURRENT ACTIVITIES

The Committee has asked us to define the criteria we use in differentiating rural non-farm development research from other research. In response I want to state that our user criteria dictates that non-farm rural research should affect all people in rural areas.

Some specific target groups affected are small and part-time farmers, members of local government and planning groups in rural areas, hired and migratory agricultural workers, commercial farmers, rural non-farm people, young people, low-income and poverty income level people, and elderly and retired people, just to mention a few.

Appendix I of my statement lists other criteria—for example, kinds of decisions influenced, processes influenced, and recipients of benefits.

Current activities are represented by some 1300 rural development related projects. Of these we can identify a solid core of 400 projects. These 400 projects concentrate on critical needs in employment, health, environment, recreation, and the financing and delivery of rural community services.

These efforts include the work Extension does to expand the business and industrial base of the community, provide community facilities and services, develop community supported manpower programs, improve citizen participation in local governing processes and develop community organizations that can address local citizen needs (such as housing authorities or planning commissions).

The primary objectives of Extension's non-farm CRD program are: (1) to help stimulate local initiatives and enhance local determination of community priorities and improvements, and (2) to improve communications and cooperation between governmental agencies, local organizations, local officials and concerned citizens.

Currently, Extension is providing assistance to over 50,000 community development projects that involve approximately 2½ million citizens. The major focus of the projects and the supporting education program is centered on jobs, economic development, housing, and community services and facilities. Some 125,000 citizens and officials are also being provided with taxation and local government operations assistance.

A closely related activity is the Resource Conservation and Development (RC&D) program. This program is carried out under the leadership of the Soil Conservation Service. The program provides coordination and technical and financial assistance in implementing RC&D area plans in 178 authorized areas covering one-third of the contiguous land area of the United States. These 178 areas cover nearly 1,200 counties, with 3,145 sponsoring local units of government. Applications for an additional 63 areas are awaiting authorization. RC&D area plans are carried out through installation or completion of "measures" which are individual projects for achieving the sponsors' goals and objectives. Local sponsors complete annually an average of 1,800 measures—250 of which are installed with USDA technical assistance and guidance.

EXAMPLES OF SERVICES

And all across rural America rural Americans in all walks of life are being served.

Take the eastern shore of Virginia. This is a lagging region. It has had low income, substantial unemployment, and heavy emigration.

To help solve the region's problems the Division of Planning and Development of the State of Virginia, and the Virginia Planning District asked the Department of Agricultural Economics at Virginia Polytechnic Institute and State University to initiate two studies. One study defined development opportunities in agriculture. The other analyzed business and governmental activities, and examined income and employment impacts of changes in various sectors of the economy. The results of the studies were discussed with local citizens, and planning and development groups. The work of the researchers and extension personnel was praised as uniquely helpful, in contrast to occasions when the region was surveyed before.

Why were these studies so useful, in contrast to others in the past

Because researchers and extension personnel involved local citizens as well as local and State officials in the formulation of the problems to be studied. Local people were included right from the start.

Because research and extension dealt with a major problem, one recognized as such by all the parties involved.

Because research and extension not only diagnosed the ills, but also explored the alternative remedies—and then recommended specific treatment.

They reported the findings to local people and local and State officials promptly.

Finally, they followed up with further analysis that the studies indicated was needed, and analysis is continuing today.

I believe that a lot can be learned from this project about why some studies succeed and others don't.

Other research has made significant contributions to the formulation of national policy. A regional project in the Northeast on agricultural labor assessed alternatives for extending unemployment insurance coverage to farm workers. The Department of Labor contributed staff to help formulate the research problem. It also contributed additional funds to support the research. When the research was completed, a policy conference at Ohio State University explored the results and implications. The results became the basis for an administrative proposal and other legislative proposals. William H. Kohlberg, Assistant Secretary of Labor for Manpower, commented: "It is a rare occurrence when the results of research conducted by the academic world bear such a close and timely relationship to legislative proposals of the administration."

Let me cite other examples of successful projects that have served rural Americans:

In Iowa, research on railroad transportation and abandonment done by Dr. C. Phillip Baumel led to an expansion and improvement of rail and grain storage facilities at more than 100 Iowa sites. The Iowa Rail Plan put out by the Iowa Department of Transportation drew heavily on Dr. Baumel's work. Some farmers say Dr. Baumel's work brought them an additional 7¢ per bushel of grain.

In Delaware, joint research and extension effort completed a 39-unit mobile home park. The project used EDA funds for water and sewer facilities and HUD funds for site development.

In Pennsylvania, still another joint research and extension project helped provide a primary health care center in northern Indiana County. The Mahoning Medical Center now serves 22,000 people with a physician, a physician's assistant, dentist, pharmacist, and various support personnel.

OTHER EXAMPLES OF ACCOMPLISHMENTS

An impact study of a project to reach 650 hard core poverty families in Kentucky showed significant reductions in alienation from their community and government, increased loyalty in their community, increases in vocational aspirations, a major change in attitudes toward modern society, and an increase in self-reliance for solving problems as a result of an Extension leadership training project.

In Vermont, an Extension-sponsored industrial development task force resulted in the addition of 150 new jobs for one county.

In Maryville, Missouri, Extension helped establish a community group that now has seven projects either completed or underway, including a day care center, community attitude survey, endorsement of a bond issue, airport expansion, and the development of a lake for flood control, water supply and recreation.

In Arkansas, Extension trained local leaders and involved them in a long-range community needs assessment and goal setting process. Some 245 meetings of this type were held for 1,850 community leaders. In addition, 1,700 local citizens attended 75 eight-hour workshops on effective decisionmaking and the community development process. Arkansas also provided organizational and technical assistance to groups and organizations such as lake improvement associations, craft guilds, and civic organizations.

FUTURE PLANS

How can rural development research and extension continue to help meet the needs of rural America?

We should proceed by building upon the Federal-State partnership. This is basic.

But how should the Federal role develop? The National Rural Center, a private non-profit organization in Washington, D.C., has recommended one approach. In a policy paper dated December 7, 1977, the Center proposes that our rural development strategy consist of three parts—goals, action programs, and the "essential process."

By the "essential process," the Center means the process by which specific goals are defined and action programs are brought to bear on the needs and problems of citizens and their local communities. The need to tailor the national effort to local problems must be underscored.

New research and extension can make this "essential process" productive. Research and extension can help communities think through their own problems—they know them best—and establish their own goals.

The major objective of non-farm rural development research and extension is to reach more local communities. This is necessary if we are to increase job opportunities, improve availability of quality rural services, improve the immediate environment, upgrade the quality of housing, and build the capacity of local communities to effectively meet their needs.

A major goal of extension is to give added attention to increasing job and income opportunities in rural America and to strengthening local units of government and their planning capabilities. A special thrust is also being made to train rural leaders and to get more citizen participation in the development process. Through these efforts, local communities should be better able to resolve their development problems with their own leadership and their own resources. When outside resources are necessary, they should be able to make better use of the Federal grant and loan programs.

To do this, we need to further improve the quality and productivity of current efforts. In research this requires more orientation of projects toward development and policy analysis.

What do I mean by "development and policy analysis"?

I mean emphasizing basic analyses of development issues and problems in their specific institutional settings. And these settings should include specific causes, effects, and consequences.

I mean enriching the theory of rural developmental research, so that users in local settings will have a broad variety of solutions to choose from, as broad as possible.

I mean devising, assessing, and testing specific institutional and technological innovations.

I mean devising and testing information, evaluation, and monitoring systems that make it possible to assess the extent to which programs achieve their objectives. These systems should also determine the overall impact, intended and unintended, programs have had on the conditions they were designed to improve.

I mean analyzing and evaluating program agencies as individual agencies and as part of the larger system or network through which policies and programs are implemented. Their place in the "field" or community, their relationship to other organizations serving the same community, has to be pinpointed and understood. The USDA-Land-Grant research system, through Extension services, can help them find their place, on a cooperative basis.

Finally, I mean analyzing issues of equity that arise in the distribution of the benefits and burdens of public programs.

These are the specifics of making rural development research and education more development and policy oriented. I suppose you can sum it up by saying that while general theory has to be enriched, we also have to pay more attention to the "nuts and bolts." I believe both can be done. I believe we can do a better job of trying to do both.

CONCLUSION

Mr. Chairman, we can look forward with confidence to a continuation of the effective job that rural development research and extension has been doing.

This review you have begun will be important. We are ready to re-examine anything that this Committee believes should be re-examined.

The 1979 budget requests $307 million in research and extension formula funds which can be utilized for rural development activities. However, no funds have been requested for the Title V programs. This does not signify a reduced interest in rural development, but rather this decision reflects the balance which had to be struck between continuing priority activities, initiating new activities, and minimizing budget deficits.

Mr. Chairman, the problems that remain to be solved are many, despite past and present progress.

But these problems can be solved.

Research and extension are essential components of any rural development strategy looking toward their solution.

Therefore, any national commitment to solving rural development problems should consider strengthening of rural research and extension activities.

The review you have suggested, Mr. Chairman, is a step in that direction. That is why I appreciate the opportunity to take part in it here today.

[Questions submitted by Senator Leahy to USDA, prior to the hearings of May 4 and 5, 1978, and answers thereto.]

APPENDIX I

Question 1. As succinctly as possible, please delineate the various kinds of research conducted at USDA of relevance to rural development. Clarify, if possible distinctions frequently made between basic and applied research; qualitative and quantitative research; social versus physical science research foci; activities reported as monitoring, indexing, reporting and "data-banking."

Response. We believe the answer to question No. 1 has been dealt with in the text of Ass't Secretary Cutler's speech.

Question 2. How does USDA define rural development? Is this definition the working definition employed by the various research divisions of USDA? Can it be assumed that in the research priority process, and at the participating institutions, there is a common use of this definition?

Response. This question has been partially answered by Assistant Secretary Cutler's speech. Reference is made within the speech to the criteria for differentiating rural development research from other research. See the following chart for those criteria.

CRITERIA FOR DIFFERENTIATING BETWEEN RURAL DEVELOPMENT RESEARCH AND OTHER STATION RESEARCH

Criteria	Rural development research	Other station research
Focus	Primarily people, communities and multi-county development districts.	Primarily technological products and processes.
Decisions influenced	Primarily public and group decisions	Primarily private and individual.
Groups affected	Primarily all people in rural areas Small and part-time farmers. Local government and planning groups in nonmetropolitan areas. Agricultural workers—hired and migratory. Commercial farmers. Rural nonfarm people. Community organizations and institutions. Young people. Low-income and poverty people. Elderly and retired people. Providers and users of community services. Producers and consumers of natural resource products and services.	Primarily farmers. Managers of agribusiness. All consumers of farm products—rural and urban.
Types of potential benefits	Improved economic opportunities Improved social and cultural environment. Improved community services: Housing; education; health-medical; water; waste disposal systems; enhancement of rural people, communities, institutions, and government; conservation of the environment and abatement of pollution.	Production and marketing efficiency. Greater production capacity. Increased farm income. Better quality diets at lower relative food expenditures.
Primary processes influenced	Development and organizational: New activities and improvement of existing systems—economic, social, environment.	Continued economic growth of established competitive industries.
Relationship to established research programs	Expands research under the USDA department goals VIII and IX (improvement of level of living and community improvement).	Continues research under USDA department goals I–VIII.

APPENDIX II

NONFARM, NONFOOD, NONFIBER, RURAL DEVELOPMENT RESEARCH, SCIENCE, AND EDUCATION ADMINISTRATION—FEDERAL RESEARCH

Question 3. A list of all non-farm, non-food and non-fiber, rural development research being conducted by the various research divisions at USDA (excluding activities at the land grants, experiment stations and other regional activities). The list should include: (a) total number of projects, total number of scientific years (SMYS), and total number of dollars allocated by each research division (b) the percentage of each division's total research by projects, (SMYS) and dollars represented by rural development research. The projects should be grouped by key words which relate to rural development.

Response (a) Three projects, 6 SY's, $389,000 for Fiscal Year 1978.

Reducing energy in rural homes at Clemson University, 4 SY's $290,000.

Keywords: Rural low cost housing construction, techniques, materials; prototype houses; heating, cooling, electrical systems.

Rural water and waste disposal systems: Beltsville, Maryland, 1 SY, $66,000; Clemson, South Carolina, 1 SY, $33,000.

Keywords: Individual water systems; onsite domestic waste disposal; well construction; water pollution.

(b) This represents 0.1 percent of SEA-FR's budget and SY's.

IN-HOUSE DATA COLLECTION SEA-FR

Question 4. (a) Identify the allocation of time (if possible) and money USDA has spent in the last five years, in-house, to gather primary data regarding conditions in non-farm, rural America. This should be broken down by each agency, identifying the areas where data collection has been conducted.

(b) Identify the allocation of time (if possible) and money USDA has spent in the last five years, in-house, to conduct data analysis regarding conditions in non-farm, rural America. This should be broken down by each agency, identifying the areas where data analysis has been conducted.

Response (a) SEA-FR contracted a national sample survey of home food consumption 1977–78. Sampling is designed to provide estimates nationally and for four regions. Sample households were stratified by three urbanizations—central city, suburban, and non-metropolitan. This survey was conducted between 4/1/77 and 3/31/78. Several agencies contributed to the survey which was done by a contract. The technical preparation was largely done in-house. The costs and contributions are shown in the accompanying tabulation. (See p. 7.)

(b) Federal Research has conducted analysis on a number of household budget expenditures for both rural and urban families. We can provide estimates of the costs of the rural component of this analysis if desired.

IN-HOUSE DATA COLLECTION ESCS

(a) ESCS is a major user of data collected by other agencies in its rural development research activity. Most of the ESCS expenditures for primary data collection relating to rural people and communities is for information on the farm population and hired farm workers. We have spent approximately $200 thousand per year for these data in the last 5 years. Direct expenditures for the remainder of our rural development data collection activities involve limited information on the aged, rural housing, and problems of local decisionmakers. These activities involve average expenditures of $10,000 per year. (See the following tables.)

RESEARCH ALLOCATIONS FOR RURAL DEVELOPMENT RESEARCH, ERS, FISCAL YEARS 1973–77

[In thousands of dollars]

Year	Employment FTP	SY for research	Funds			Percent for RD research
			Appropriated	Other	Total	
Economic Development Division:						
1977	93	54.4	2,620	163	2,783	84.0
1976[1]	88	[2] 58.3	[2] 2,366	[2] 286	[2] 2,652	[2] 89.4
1975	92	48.3	2,388	139	2,527	80.0
1974	94	53.2	2,318	79	2,397	81.4
1973		58.2	2,220	222	2,442	86.1
Natural Resources Economic Division:						
1977		27.6	966	300	1,266	55.1
1976		30.9	1,015	240	1,255	55.4
7975		24.1	852	116	968	43.3
1974		38.6	924	107	1,031	52.1
1973[3]	NA	NA	NA	NA	NA	NA

[1] Includes transition quarter.

[2] Annual rate.

[3] Reorganization changed project structure.

NA = Not available.

APPENDIX III

Question 5. Identify allocations for Title V, Rural Development Act of 1972 as follows each year since FY 1974: a—requested; b—appropriated; c—obligated.

Response. Sums requested appropriated and obligated to support Title V are indicated in the table below:

Allocations for Title V, Rural Development Act of 1972

	Millions
Fiscal year 1974:	
Requested	$5
Appropriated	3
Obligated	3
Fiscal year 1975:	
Requested	3
Appropriated	3
Obligated	3
Fiscal year 1976—(includes transition quarter—change in dates of fiscal year):	
Requested	[1] 0
Appropriated	3.75
Obligated	3.75
Fiscal year 1977:	
Requested	0
Appropriated	3
Obligated	3
Fiscal year 1978:	
Requested	3
Appropriated	4
Obligated	4

[1] Requested under formula provisions of act.

RURAL HOUSING IS THE COMPONENT OF RURAL DEVELOPMENT THAT APPLIES TO FR (ARS)

Question 6. Identify money requested and appropriated by USDA for non-farm rural programs for FY '76 to FY '79. Contrast these data with similar requests and appropriations for farm, food and fiber programs.

Response:

BUDGET HISTORY: RURAL HOUSING VIS-A-VIS TOTAL APPROPRIATION FR (ARS)

[In thousands of dollars]

	Agency	Department	OMB	Appropriation act
1979				
Farm, food and fiber	$440,994	$362,053	$323,588	(²)
Rural housing	489	489		(²)
Budget authority	441,483	362,542	323,588	(²)
1978				
Farm, food and fiber	408,905	337,889	319,338	$324,478
Rural housing	881	381	381	381
Budget authority	409,786	338,270	319,719	324,859
1977				
Farm, food and fiber	301,436	259,756	262,893	270,267
Rural housing	328	315	309	309
Budget authority	301,764	260,071	263,202	270,576
1976				
Farm, food and fiber	267,320	229,368	240,901	255,446
Rural housing	288	223	229	229
Budget authority	267,608	229,594	241,130	255,675

[1] The decision reflects the availability of resources in other departments, most notably HUD.

[2] Unknown.

TABLE 1.—DISTRIBUTION OF FEDERAL PAYMENTS TO STATES AND NON-FEDERAL FUNDS FOR RESEARCH AT STATE AGRICULTURAL EXPERIMENT STATIONS AND OTHER STATE INSTITUTIONS—FISCAL YEAR 1972

State	Hatch Act, as amended			Cooperative forestry research (M–S)	Contracts and grants for scientific research	Other funds	Total Federal grant funds	Non-Federal funds	Grand total
	Regular formula	Regional research	Total						
Alabama	$1,350,007	$278,778	$1,628,785	$152,700	$1,254,694	....	$3,036,179	$4,979,363	$8,015,542
Alaska	359,391	43,971	403,362	79,562	....	....	482,924	1,032,685	1,515,609
Arizona	478,799	273,559	752,358	61,279	110,000	....	923,637	4,807,952	5,731,539
Arkansas	1,117,020	236,035	1,353,055	140,510	721,129	....	2,214,694	4,596,533	6,811,227
California	1,362,745	493,890	1,856,635	158,794	352,000	....	2,367,429	25,613,391	27,980,820
Colorado	605,827	371,519	977,346	91,752	....	....	1,069,098	3,022,797	4,091,895
Connecticut	500,267	180,717	680,984	60,213	....	....	741,197	2,680,784	3,421,981
Delaware	385,026	142,727	527,753	24,709	239,373	....	791,835	827,833	1,619,668
Florida	812,579	160,436	973,015	137,462	375,076	....	1,485,553	14,094,013	15,579,566
Georgia	1,429,260	356,559	1,785,819	161,842	668,551	....	2,616,212	7,090,505	9,706,717
Hawaii	409,784	141,467	551,251	36,898	....	....	588,149	3,752,513	4,340,662
Idaho	554,334	221,973	776,307	100,894	....	....	877,201	2,610,866	3,488,067
Illinois	1,495,479	330,897	1,826,376	82,611	25,000	....	1,933,987	7,928,008	9,861,995
Indiana	1,330,529	304,594	1,635,123	85,658	25,000	....	1,745,781	6,574,561	8,320,342
Iowa	1,361,390	477,112	1,838,502	64,325	172,000	....	2,074,827	6,587,128	8,661,955
Kansas	920,075	264,260	1,184,335	39,946	80,000	....	1,304,281	6,295,781	7,600,062
Kentucky	1,487,957	294,079	1,782,036	94,799	679,029	....	2,546,864	5,946,355	8,493,219
Louisiana	1,009,600	209,365	1,218,965	143,558	623,036	....	1,985,559	7,493,516	9,479,075
Maine	533,857	194,727	728,584	134,415	....	....	862,999	1,466,037	2,329,036
Maryland	692,022	229,949	921,971	67,372	336,756	....	1,326,099	2,749,439	4,075,538
Massachusetts	622,481	231,735	854,216	58,230	....	....	912,446	1,145,082	2,057,528
Michigan	1,418,653	262,852	1,681,505	128,321	90,000	....	1,899,826	8,085,554	9,985,380
Minnesota	1,298,650	286,453	1,585,103	119,179	70,000	....	1,774,282	8,917,382	10,691,664
Mississippi	1,442,809	285,462	1,708,271	146,605	837,050	....	2,691,926	6,413,656	9,105,582
Missouri	1,362,184	276,579	1,638,763	110,036	654,559	....	2,403,358	6,285,457	8,688,815
Montana	528,603	259,944	788,547	103,941	96,900	....	989,388	3,260,043	4,249,431
Nebraska	832,550	287,390	1,119,940	33,851	174,900	....	1,328,691	7,587,306	8,915,997
Nevada	354,121	140,772	494,893	27,756	....	....	522,649	1,202,489	1,725,138
New Hampshire	424,262	144,103	568,365	73,468	....	....	641,833	494,960	1,136,793
New Jersey	602,797	321,139	923,936	46,042	70,000	....	1,039,978	5,866,085	6,906,063
New Mexico	498,943	148,682	647,625	49,088	140,000	....	836,713	1,612,397	2,449,110
New York	1,423,403	518,233	1,941,636	149,651	270,000	....	2,361,287	13,348,729	15,710,016

North Carolina	2,064,265	390,902	2,455,167	155,747	880,854		3,491,768	9,285,513	12,777,281
North Dakota	652,616	221,535	874,151	15,568			889,719	3,445,513	4,335,232
Ohio	1,670,536	287,841	1,958,377	88,704	79,800		2,126,881	6,281,631	8,408,512
Oklahoma	954,494	201,031	1,155,525	76,515	544,216		1,776,256	4,258,626	6,034,882
Oregon	687,952	365,008	1,052,960	167,936	75,000		1,295,896	6,902,569	8,198,465
Pennsylvania	1,755,678	398,794	2,154,472	122,226			2,276,698	4,955,628	7,232,326
Puerto Rico	1,496,995	257,451	1,754,446				1,754,446	4,392,169	6,146,615
Rhode Island	364,479	152,898	517,377	21,662			539,039	597,789	1,136,828
South Carolina	1,168,187	231,865	1,400,052	125,273	567,848		2,093,173	3,079,284	5,172,457
South Dakota	651,732	225,258	876,990	33,998			910,968	2,830,543	3,741,531
Tennessee	1,523,062	294,024	1,817,086	106,989	606,051		2,530,126	3,693,226	6,223,352
Texas	1,952,760	391,539	2,344,299	116,131	970,651		3,431,081	11,994,071	15,425,152
Utah	445,721	269,746	715,467	55,184			770,651	1,829,951	2,600,602
Vermont	450,271	119,070	569,341	70,420			639,761	718,459	1,358,220
Virginia	1,329,429	260,704	1,590,133	131,368	634,527		2,356,028	4,467,927	6,823,953
Washington	783,459	441,965	1,225,424	164,888			1,390,312	6,620,491	8,010,803
West Virginia	906,583	181,260	1,087,843	97,846			1,185,689	1,146,714	2,332,403
Wisconsin	1,307,631	320,184	1,627,815	113,084	85,000		1,825,899	12,348,038	14,173,937
Wyoming	407,427	211,162	618,589	42,994			661,583	1,411,679	2,073,262
Subtotal	49,558,681	13,592,195	63,150,876	4,672,000	12,500,000		80,322,876	274,629,021	354,951,897
Committee of 9 (travel)		9,000	9,000				9,000		9,000
Unobligated balance	28,467	17,368	45,835				45,835		45,835
Subtotal	49,587,148	13,618,563	63,205,711	4,672,000	12,500,000		80,377,711	274,629,021	355,006,732
Federal administration from Hatch funds (3 pct)			1,637,784				1,637,784		1,637,784
Unobligated balance			86,505				86,505		86,505
CSPS appropriation						$637,000	637,000		637,000
Unobligated balance									
Subtotal	49,587,148	13,618,563	64,930,000	4,672,000	12,500,000	637,000	82,739,000	274,629,021	357,368,021
Penalty mail						209,000	209,000		209,000
Grand total	49,587,148	13,618,563	64,930,000	4,672,000	12,500,000	846,000	82,948,000	275,629,021	357,577,021

TABLE 1.—DISTRIBUTION OF FEDERAL PAYMENTS TO STATES AND NON-FEDERAL FUNDS FOR RESEARCH AT STATE AGRICULTURAL EXPERIMENT STATIONS AND OTHER STATE INSTITUTIONS—FISCAL YEAR 1973

State	Hatch Act, as amended			Cooperative forestry research (M–S)	Contracts and grants for scientific research	Other funds	Total Federal-grant funds	Non-Federal funds	Grand total
	Rauglar formula	Regional research	Total						
Alabama	$1,399,506	$297,114	$1,696,620	$158,084	$1,470,915		$3,325,619	$5,193,130	$8,518,749
Alaska	367,222	47,135	414,357	85,293			499,650	840,143	1,339,793
Arizona	494,777	289,506	784,283	67,094	180,000		1,031,377	5,177,008	6,208,385
Arkansas	1,160,076	251,630	1,411,706	145,952	743,628		2,301,286	4,960,791	7,262,077
California	1,421,635	524,741	1,946,376	164,151	175,000		2,285,527	31,053,908	33,339,435
Colorado	630,734	394,533	1,025,267	97,424			1,122,691	3,072,783	4,195,474
Connecticut	512,216	193,621	705,837	57,994			763,831	2,717,156	3,480,987
Delaware	396,096	152,074	548,170	30,698	268,967		847,835	928,234	1,776,069
Florida	850,409	170,978	1,021,387	142,920	608,582		1,772,889	15,394,031	17,166,920
Georgia	1,486,733	380,280	1,867,013	167,183	798,475		2,832,671	9,016,152	11,848,823
Hawaii	418,693	153,445	572,138	42,830			614,968	3,748,862	4,363,830
Idaho	577,600	235,784	813,384	106,523	45,000		964,907	2,724,717	3,689,624
Illinois	1,582,807	354,488	1,937,295	88,325	158,250		2,183,870	8,345,486	10,529,356
Indiana	1,410,731	329,117	1,739,848	91,358	168,250		1,999,456	6,776,003	8,775,459
Iowa	1,446,544	489,427	1,935,971	70,127	170,000		2,176,098	6,853,501	9,029,599
Kansas	968,605	283,239	1,251,844	45,863			1,297,707	6,806,869	8,104,576
Kentucky	1,562,700	312,744	1,875,444	100,457	735,556		2,711,457	4,595,108	7,306,565
Louisiana	1,050,602	223,187	1,273,789	148,985	704,570		2,127,344	8,268,847	10,396,191
Maine	551,933	207,515	759,448	139,887			899,335	1,660,889	2,560,224
Maryland	721,853	245,029	966,882	73,160	451,152		1,491,194	2,855,624	4,346,818
Massachusetts	646,777	246,902	893,679	64,061			957,740	1,192,383	2,150,123
Michigan	1,496,516	281,554	1,778,070	133,821	190,000		2,101,891	8,636,479	10,738,370
Minnesota	1,373,601	306,902	1,680,503	124,721			1,805,224	9,627,837	11,433,061
Mississippi	1,474,536	304,241	1,778,777	152,018	1,064,598		2,995,393	6,841,504	9,836,897
Missouri	1,433,463	296,335	1,729,798	115,622	870,782		2,716,202	6,158,230	8,874,432
Montana	550,515	276,097	826,612	109,557			936,169	3,437,039	4,373,208
Nebraska	876,120	307,497	1,183,617	39,797	76,922		1,300,336	9,062,300	10,362,636
Nevada	363,774	149,555	513,329	33,731			547,060	1,168,853	1,715,913
New Hampshire	437,872	153,527	591,399	79,226			670,625	537,410	1,208,035
New Jersey	627,182	370,237	997,419	51,929			1,049,348	6,270,632	7,319,980
New Mexico	515,531	157,899	673,430	54,963	90,000		818,393	1,670,513	2,488,906
New York	1,497,037	552,609	2,049,646	155,051	365,000		2,569,697	15,005,962	17,575,659
North Carolina	2,161,117	416,683	2,577,800	161,116	1,159,630		3,898,546	10,949,225	14,847,771
North Dakota	682,729	237,358	920,087	21,599			941,686	3,721,994	4,663,680
Ohio	1,764,059	308,363	2,072,422	94,391	258,250		2,425,063	7,492,000	9,917,063

Oklahoma	995, 291	214, 409	1, 209, 700	82, 260	650, 508		1, 942, 468	4, 147, 580	6. 090, 048
Oregon	718, 335	390, 107	1, 108, 442	173, 248	75, 000		1, 356, 690	7, 633, 149	8, 989, 839
Pennsylvania	1, 845, 468	419, 488	2, 264, 956	127, 754	30, 000		2, 422, 710	5, 105, 573	7, 528, 283
Puerto Rico	1, 558, 843	291, 249	1, 850, 092				1, 850, 092	4, 568, 566	6, 418, 658
Rhode Island	369, 446	162, 952	532, 398	27, 665			560, 063	618, 404	1, 178, 467
South Carolina	1, 211, 040	247, 121	1, 458, 161	130, 787	697, 014		2, 285, 962	4, 334, 542	6, 620, 504
South Dakota	683, 436	241, 368	924, 804	36, 764			961, 568	3, 175, 244	4, 136, 812
Tennessee	1, 593, 330	313, 427	1, 906, 757	112, 590	897, 861		2, 917, 208	4, 274, 412	7, 191, 620
Texas	2, 042, 007	417, 318	2, 459, 325	121, 688	1, 259, 326		3, 840, 339	12, 426, 700	16, 267, 039
Utah	459, 406	286, 523	745, 929	61, 028			806, 957	1, 850, 308	2, 657, 265
Vermont	457, 053	125, 029	582, 082	76, 193			658, 275	780, 776	1, 439, 051
Virginia	1, 387, 439	277, 891	1, 665, 330	136, 854	817, 909		2, 620, 093	5, 472, 548	8, 092, 641
Washington	819, 084	472, 902	1, 291, 986	170, 217	127, 295		1, 589, 498	7, 062, 735	8, 652, 233
West Virginia	938, 374	193, 166	1, 131, 540	103, 490			1, 235, 030	1, 269, 526	2, 504, 556
Wisconsin	1, 394, 598	345, 153	1, 739, 751	118, 655	91, 560		1, 949, 966	10, 270, 677	12, 220, 643
Wyoming	420, 363	224, 222	644, 585	48, 896			693, 481	2, 105, 698	2, 799, 179
Guam	303, 009		303, 009				303, 009	56, 651	359, 660
Virgin Islands	90, 000		90, 000				90, 000		90, 000
Subtotal	52, 198, 823	14, 523, 671	66, 722, 494	4, 944, 000	15, 400, 000		87, 066, 494	297, 914, 692	384, 981, 186
Committee of 9 (travel)		17, 820	17, 820				17, 820		17, 820
Unobligated balance	259, 525	4, 572	264, 097				264, 097		264, 097
Subtotal	52, 458, 348	14, 546, 063	67, 004, 411	4, 944, 000	15, 400, 000		87, 348, 411	297, 914, 692	385, 263, 103
Federal administration from Hatch funds (3 pct)			1, 765, 312				1, 765, 312		1, 765, 312
Unobligated balance			70, 277				70, 277		70, 277
CSRS appropriation						$490, 000	490, 000		490, 000
Subtotal			1, 835, 589			490, 000	2, 325, 589		2, 325, 589
Penalty mail						258, 980	258, 980		258, 980
Unobligated balance						5, 020	5, 020		5, 020
Subtotal						264, 000	264, 000		264, 000
Reserve—unobligated balance				1, 500, 000			1, 500, 000		1, 500, 000
Grand total	52, 458, 348	14, 546, 063	68, 840, 000	6, 444, 000	15, 400, 000	754, 000	91, 438, 000	297, 914, 692	389, 352, 692

TABLE 1.—DISTRIBUTION OF FEDERAL PAYMENTS TO STATES AND NON-FEDERAL FUNDS FOR RESEARCH AT STATE AGRICULTURAL EXPERIMENT STATIONS AND OTHER STATE INSTITUTIONS—FISCAL YEAR 1974

State	Hatch Act, as amended			Cooperative forestry research (M-S)	Contracts grants for scientific research	Rural Development Act	Other funds	Total Federal-grant funds	Non-Federal funds	Grand total
	Regular formula	Regional research	Total							
Alabama	$1, 412, 845	$303, 423	$1, 716, 268	$204, 305	$1, 360, 915	$27, 948	----	$3, 309, 436	$6, 295, 724	$9, 605, 160
Alaska	373, 297	47, 773	421, 070	102, 531	----	7, 340	----	530, 941	1, 027, 635	1, 558, 576
Arizona	500, 151	291, 661	791, 812	94, 702	----	10, 478	----	896 992	5, 398, 255	6, 295, 247
Arkansas	1, 171, 858	257, 229	1, 429, 087	184, 732	588, 628	24, 529	----	2, 226, 976	6, 334, 804	8, 561, 780
California	1, 437, 213	547, 806	1, 985, 019	208, 220	----	32, 862	----	2 226, 101	33, 414, 241	35, 640, 342
Colorado	638, 213	400, 080	1, 038, 293	110, 360	----	15, 092	----	1, 163, 745	3, 061, 964	4, 225, 709
Connecticut	540, 112	195, 635	735, 747	67, 301	----	12 920	----	815, 968	2, 806, 750	3, 622, 718
Delaware	400, 298	155, 999	556, 297	35, 986	268, 967	7, 908	----	869, 158	1, 035, 900	1, 905, 058
Florida	861, 000	174, 782	1, 035, 782	161, 246	446, 199	21, 925	----	1, 665, 152	17, 988, 794	19, 653, 946
Georgia	1, 501, 980	372, 727	1, 874, 707	212, 134	803, 475	32, 135	----	2, 922, 451	11, 072, 731	13, 995, 182
Guam	75, 000	----	75, 000	----	----	----	----	75, 000	----	75, 000
Hawaii	423, 827	153, 064	576, 891	55, 559	----	7, 392	----	639, 842	3, 766, 619	4, 406, 461
Idaho	584, 696	242, 248	826, 944	141, 675	----	14, 215	----	982, 834	3, 164, 743	4, 147, 577
Illinois	1, 603, 884	360, 017	1, 963, 901	118, 189	----	47, 489	----	2, 129, 579	9, 146, 365	11, 275, 944
Indiana	1, 431, 308	333, 829	1, 765, 137	114, 274	----	43, 813	----	1, 923, 224	7, 359, 293	9, 282, 517
Iowa	1, 468, 222	495, 309	1, 963, 531	82, 959	75, 000	83, 716	----	2, 205, 206	7, 672, 880	9, 878, 086
Kansas	980, 876	285, 856	1, 266, 732	51, 644	----	26, 419	----	1, 344, 795	7, 858, 553	9, 203, 348
Kentucky	1, 582, 449	320, 380	1, 902, 829	129, 931	735, 556	41, 640	----	2, 809, 956	4, 840, 823	7, 650, 779
Louisiana	1, 061, 929	226, 687	1, 288, 616	192, 562	537, 570	23, 537	----	2, 042, 285	9, 312, 669	11, 354, 954
Maine	557, 811	210, 956	768, 767	176, 904	----	11, 585	----	957, 256	1, 975, 541	2, 932, 797
Maryland	730, 529	249, 093	979, 622	79, 045	396, 152	17, 723	----	1, 472, 541	3, 066, 507	4, 539, 049
Massachusetts	654, 152	254, 062	908, 214	90, 788	----	14, 871	----	1, 013, 873	1, 080, 627	2, 094, 500
Michigan	1, 516, 593	286, 004	1, 802, 597	180, 819	90, 000	42, 727	----	2, 116, 143	9, 639, 243	11, 755, 386
Minnesota	1, 399, 481	311, 750	1, 711, 231	149, 504	----	43, 516	----	1, 904, 251	11, 304, 523	13, 208, 774
Mississippi	1, 488, 378	307, 445	1, 795, 823	196, 476	787, 598	66, 546	----	2, 846, 443	9, 165, 038	12, 011, 481
Missouri	1, 451, 906	301, 018	1, 752, 924	137, 760	761, 692	39, 131	----	2, 691, 507	6, 535, 078	9, 226, 585
Montana	557, 277	271, 723	829, 000	133, 846	----	13, 518	----	976, 364	4, 241, 575	5, 217, 939
Nebraska	887, 985	312, 250	1, 200, 235	47, 730	----	24, 703	----	1, 272, 668	10, 200, 753	11, 473, 421
Nevada	367, 639	148, 386	516, 025	39, 901	----	7, 166	----	563, 092	1, 523, 811	2, 086, 903
New Hampshire	442, 779	154, 633	597, 412	106, 445	----	9, 298	----	713, 155	621, 544	1, 334, 699
New Jersey	634, 570	381, 885	1, 016, 455	63, 387	----	14, 898	----	1, 094, 740	6, 894, 134	7, 988, 874
New Mexico	519, 101	162, 186	681, 287	71, 216	----	10, 802	----	763, 305	1, 920, 013	2, 683, 318
New York	1, 516, 112	561, 060	2, 077, 172	188, 647	75, 000	78, 037	----	2, 418, 856	15, 585, 042	18, 003, 898
North Carolina	2, 185, 693	422, 083	2, 607, 776	200, 391	969, 630	52, 593	----	3, 830, 390	12, 304, 773	16, 135, 163
North Dakota	691, 416	241, 109	932, 525	28, 158	----	17, 737	----	978, 420	4, 122, 018	5, 100, [illegible]

Ohio	1, 787, 838	313, 234	2, 101, 072	122, 102	55, 000	50, 843	----------	2, 329, 017	8, 241, 511	10, 570, 528
Oklahoma	1, 006, 529	218, 989	1, 225, 518	98, 616	516, 908	23, 336	----------	1, 864, 378	4, 681, 484	6, 345, 862
Oregon	727, 119	395, 445	1, 122, 564	216, 048	75, 000	55, 455	----------	1, 469, 067	7, 909, 299	9, 378, 366
Pennsylvania	1, 868, 443	426, 537	2, 294, 980	165, 161	----------	49, 096	----------	2, 509, 237	5, 547, 636	8, 056, 873
Puerto Rico	1, 575, 049	297, 722	1, 872, 771	----------	----------	34, 225	----------	1, 906, 996	5, 246, 372	7, 153, 368
Rhode Island	377, 579	165, 654	543, 233	32, 072	----------	7, 119	----------	582, 424	682, 967	1, 265, 391
South Carolina	1, 222, 813	252, 320	1, 475, 133	153, 418	600, 014	24, 517	----------	2, 253, 082	5, 622, 059	7, 875, 141
South Dakota	692, 032	244, 984	937, 016	43, 815	----------	18, 560	----------	999, 391	3, 419, 038	4, 418, 429
Tennessee	1, 611, 557	320, 096	1, 931, 653	145, 589	747, 861	38, 662	----------	2, 863, 765	5, 128, 139	7, 991, 904
Texas	2, 064, 749	426, 295	2, 491, 044	172, 990	939, 326	48, 565	----------	3, 651, 925	14, 416, 102	18, 068, 027
Utah	464, 227	289, 105	753, 332	75, 130	----------	9, 264	----------	837, 726	2, 326, 722	3, 164, 448
Vermont	470, 771	128, 476	599, 247	86, 874	----------	10, 114	----------	696, 235	784, 829	1, 481, 064
Virginia	1, 402, 801	280, 200	1, 683, 001	169, 075	667, 509	32, 386	----------	2, 551, 971	6, 561, 226	9, 113, 197
Virgin Islands	83, 457	----------	83, 457	----------	----------	----------	----------	83, 457	17, 556	101, 013
Washington	829, 121	476, 717	1, 305, 838	129, 962	----------	20, 705	----------	1, 546, 505	7, 712, 434	9, 258, 939
West Virginia	933, 189	196, 371	1, 129, 560	126, 017	----------	18, 765	----------	1, 274, 342	1, 294, 896	2, 569, 238
Wisconsin	1, 414, 951	347, 774	1, 762, 725	157, 332	85, 000	43, 317	----------	2, 048, 374	11, 190, 389	13, 238, 763
Wyoming	425, 001	230, 372	655, 373	59, 472	----------	8, 862	----------	723, 707	1, 920, 582	2, 644, 289
Subtotal	52, 607, 806	14, 750, 439	67, 358, 245	6, 203, 000	11, 583, 000	1, 440, 000	----------	86, 584, 245	334, 442, 204	421, 026, 449
Committee of 9 (travel)	----------	7, 350	7, 350	----------	----------	----------	----------	7, 350	----------	7, 350
Unobligated balance	476, 222	5, 524	481, 746	----------	----------	----------	----------	481, 746	----------	481, 746
Subtotal	53, 084, 028	14, 763, 313	67, 847, 341	6, 203, 000	11, 583, 000	1, 440, 000	----------	87, 073, 341	334, 442, 204	421, 515, 545
Federal Administration:										
Hatch funds (3 pct)		----------	1, 814, 974	----------	----------	----------	----------	1, 814, 974	----------	1, 814, 974
Unobligated balance		----------	46, 685	----------	----------	----------	----------	46, 685	----------	46, 685
Rural development funds (4 pct)		----------	----------	----------	----------	28, 843	----------	28, 843	----------	28, 843
Unobligated balance		----------	----------	----------	----------	31, 157	----------	31, 157	----------	31, 157
Appropriation (direct)		----------	----------	----------	----------	----------	751, 300	751, 300	----------	751, 300
Subtotal		----------	1, 861, 659	----------	----------	60, 000	751, 300	2, 672, 959	----------	2, 672, 959
Penalty mail		----------	482, 355	----------	----------	----------	----------	482, 355	----------	482, 355
Unobligated balance		----------	−87, 355	----------	----------	----------	----------	−87, 355	----------	−87, 355
Grand total	53, 084, 028	14, 763, 313	70, 104, 000	6, 203, 000	11, 583, 000	1, 500, 000	751, 300	[1] 90, 141, 300	334, 442, 204	424, 583, 504

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[1] Includes in fiscal year 1974 for comparability purposes the fiscal year 1975 $36,000 transfer from "Office of the Secretary."

TABLE 1.—DISTRIBUTION OF FEDERAL PAYMENTS TO STATES AND NON-FEDERAL FUNDS FOR RESEARCH AT STATE AGRICULTURAL EXPERIMENT STATIONS AND OTHER STATE INSTITUTIONS—FISCAL YEAR 1975

State	Hatch Act, as amended			Cooperative forestry research (M-S)	Contracts and grants for scientific research	Rural Development Act	Other funds	Total Federal-grant funds	Non-Federal funds	Grand total
	Regular formula	Regional research	Total							
Alabama	$1, 518, 375	$339, 179	$1, 857, 554	$233, 533	$1, 558, 219	$27, 948	----------	$3, 677, 254	$9, 400, 709	$13, 077, 963
Alaska	404, 493	54, 816	459, 309	116, 250	----------	7, 340	----------	582, 899	1, 108, 224	1, 691, 123
Arizona	542, 665	324, 471	867, 136	107, 228	----------	10, 478	----------	984, 842	6, 434, 003	7, 418, 845
Arkansas	1, 265, 071	287, 870	1, 552, 941	210, 978	691, 227	24, 529	----------	2, 479, 675	9, 072, 709	11, 552, 384
California	1, 560, 461	611, 005	2, 171, 466	238, 043	124, 296	32, 862	----------	2, 566, 867	42, 518, 047	45, 084, 714
Colorado	697, 379	443, 030	1, 140, 409	125, 272	77, 577	15, 092	----------	1, 358, 350	3, 704, 422	5, 062, 772
Connecticut	591, 191	215, 769	806, 960	75, 652	----------	12, 920	----------	895, 532	3, 492, 305	4, 387, 837
Delaware	433, 546	170, 163	603, 709	39, 565	286, 281	7, 908	----------	937, 463	1, 833, 404	2, 770, 867
Florida	944, 789	199, 985	1, 144, 774	183, 913	711, 675	21, 925	----------	2, 062, 287	21, 857, 529	23, 919, 816
Georgia	1, 622, 603	411, 674	2, 034, 277	242, 554	874, 511	32, 135	----------	3, 183, 477	12, 340, 666	15, 524, 143
Guam	207, 307	----------	207, 307	----------	----------	----------	----------	207, 307	117, 307	324, 614
Hawaii	454, 558	170, 361	624, 919	62, 120	75, 000	7, 392	----------	769, 431	4, 689, 464	5, 458, 895
Idaho	640, 682	269, 034	909, 716	161, 359	70, 000	14, 215	----------	1, 155, 290	4, 533, 424	5, 688, 714
Illinois	1, 781, 120	401, 645	2, 182, 765	134, 293	87, 791	47, 489	----------	2, 452, 338	9, 597, 288	12, 049, 626
Indiana	1, 594, 098	372, 988	1, 967, 086	129, 783	150, 000	43, 813	----------	2, 290, 682	10, 344, 387	12, 635, 069
Iowa	1, 639, 727	507, 770	2, 147, 497	93, 696	75, 000	83, 716	----------	2, 399, 909	9, 833, 330	12, 233, 239
Kansas	1, 081, 982	320, 923	1, 402, 905	57, 609	87, 500	26, 419	----------	1, 574, 433	9, 583, 756	11, 158, 189
Kentucky	1, 733, 299	355, 989	2, 089, 288	147, 826	1, 048, 983	41, 640	----------	3, 327, 737	5, 232, 593	8, 560, 330
Louisiana	1, 151, 541	255, 667	1, 407, 208	220, 000	582, 409	23, 537	----------	2, 233, 154	10, 095, 004	12, 328, 158
Maine	604, 316	232, 178	836, 494	201, 957	----------	11, 585	----------	1, 050, 036	2, 286, 416	3, 336, 452
Maryland	799, 172	274, 894	1, 074, 066	89, 185	524, 979	17, 723	----------	1, 705, 953	3, 325, 167	5, 031, 120
Massachusetts	711, 886	276, 594	988, 480	102, 717	----------	14, 871	----------	1, 106, 068	1, 138, 429	2, 244, 497
Michigan	1, 675, 429	322, 916	1, 998, 345	206, 467	269, 222	42, 727	----------	2, 516, 761	10, 423, 601	12, 940, 362
Minnesota	1, 561, 232	351, 084	1, 912, 316	170, 380	----------	43, 516	----------	2, 126, 212	13, 015, 972	15, 142, 184
Mississippi	1, 597, 884	343, 541	1, 941, 425	224, 511	850, 372	66, 546	----------	3, 082, 854	12, 660, 508	15, 743, 362
Missouri	1, 597, 817	337, 209	1, 935, 026	156, 848	735, 787	39, 131	----------	2, 866, 792	6, 961, 276	9, 828, 068
Montana	610, 771	301, 490	912, 261	152, 337	----------	13, 518	----------	1, 078, 116	5, 142, 310	6, 220, 426
Nebraska	981, 850	349, 944	1, 331, 794	53, 098	163, 607	24, 703	----------	1, 573, 202	11, 253, 511	12, 826, 713
Nevada	398, 213	164, 958	563, 171	44, 076	----------	7, 166	----------	614, 413	1, 603, 004	2, 217, 417
New Hampshire	480, 880	171, 596	652, 476	120, 761	----------	9, 298	----------	782, 535	850, 528	1, 633, 063
New Jersey	693, 016	437, 820	1, 130, 836	71, 141	50, 000	14, 898	----------	1, 266, 875	7, 405, 266	8, 672, 141

New Mexico	563, 605	180, 487	744, 092	80, 163		10, 802		835, 057	2, 855, 442	3, 690, 499
New York	1, 667, 023	637, 992	2, 305, 015	215, 489	270, 250	78, 037		2, 868, 791	17, 224, 032	20, 092, 823
North Carolina	2, 380, 125	472, 759	2, 852, 884	229, 022	1, 058, 743	52, 593		4, 193, 242	13, 684, 843	17, 878, 085
North Dakota	760, 141	269, 073	1, 029, 214	30, 543		17, 737		1, 077, 494	6, 597, 269	7, 674, 763
Ohio	1, 975, 962	353, 420	2, 329, 382	138, 804	105, 000	50, 843		2, 624, 029	10, 553, 100	13, 177, 129
Oklahoma	1, 095, 441	244, 585	1, 340, 026	111, 729	645, 889	23, 336		2, 120, 990	6, 602, 018	8, 723, 008
Oregon	796, 610	436, 059	1, 232, 669	247, 065	75, 000	55, 455		1, 610, 189	8, 664, 918	10, 275, 107
Pennsylvania	2, 050, 211	477, 180	2, 527, 391	188, 424		49, 096		2, 764, 911	6, 818, 135	9, 583, 046
Puerto Rico	1, 701, 728	330, 093	2, 031, 821			34, 225		2, 066, 046	6, 111, 903	8, 177, 949
Rhode Island	408, 224	182, 027	590, 251	35, 054		7, 119		632, 424	1, 010, 592	1, 643, 016
South Carolina	1, 315, 956	282, 128	1, 598, 084	174, 891	735, 251	24, 517		2, 532, 743	7, 574, 441	10, 107, 184
South Dakota	764, 193	274, 045	1, 038, 238	48, 587		18, 560		1, 105, 385	3, 439, 507	4, 544, 892
Tennessee	1, 755, 761	357, 631	2, 113, 392	165, 870	814, 249	38, 662		3, 132, 173	5, 733, 055	8, 865, 228
Texas	2, 244, 670	477, 782	2, 722, 452	197, 446	1, 025, 333	48, 565		3, 993, 796	20, 019, 078	24, 012, 874
Utah	502, 368	320, 527	822, 895	84, 674	96, 940	9, 264		1, 013, 773	2, 518, 582	3, 532, 355
Vermont	512, 265	143, 635	655, 900	98, 208	89, 750	10, 114		853, 972	1, 228, 000	2, 081, 972
Virginia	1, 524, 338	313, 912	1, 838, 250	192, 935	946, 063	32, 386		3, 009, 634	7, 713, 023	10, 722, 657
Virgin Islands	217, 557		217, 557	17, 011				234, 568	75, 402	309, 970
Washington	908, 526	541, 692	1, 450, 218	251, 576	179, 730	20, 705		1, 902, 229	9, 618, 192	11, 520, 421
West Virginia	1, 019, 919	216, 609	1, 236, 528	143, 315		18, 765		1, 398, 608	1, 829, 312	3, 227, 920
Wisconsin	1, 575, 970	420, 154	1, 996, 124	179, 402		43, 317		2, 218, 843	11, 356, 346	13, 575, 189
Wyoming	461, 694	255, 340	717, 034	66, 630	87, 366	8, 862		879, 892	1, 779, 866	2, 659, 758
Subtotal	57, 779, 640	16, 463, 693	74, 243, 333	7, 070, 000	15, 224, 000	1, 440, 000		97, 977, 333	404, 861, 615	502, 838, 948
Committee of 9 (travel)		5, 729	5, 729					5, 729		5, 729
Unobligated balance	254, 388	12, 641	267, 029					267, 029		267, 029
Subtotal	58, 034, 028	16, 482, 063	74, 516, 091	7, 070, 000	15, 224, 000	1, 440, 000		98, 250, 091	404, 861, 615	503, 111, 706
Federal administration:										
Hatch funds (3 pct)			1, 964, 401					1, 964, 401		1, 964, 401
Unobligated balance			103, 508					103, 508		103, 508
Rural development (4 pct)						60, 000		60, 000		60, 000
Appropriation (direct)							$919, 000	919, 000		919, 000
Subtotal			2, 067, 909			60, 000	919, 000	3, 046, 909		3, 046, 909
Penalty mail			461, 131					461, 131		461, 131
Unobligated balance			−9, 131					−9, 131		−9, 131
Grand total	58, 034, 028	16, 482, 063	77, 036, 000	7, 070, 000	15, 224, 000	1, 500, 000	919, 000	101, 749, 000	404, 861, 615	506, 610, 615

TABLE 1.—DISTRIBUTION OF FEDERAL PAYMENTS TO STATES FOR RESEARCH AT STATE AGRICULTURAL EXPERIMENT STATIONS AND OTHER STATE INSTITUTIONS—FISCAL YEAR 1976

State	Hatch Act, as amended			Cooperative forestry research (M-9)	Contracts and grants for scientific research	Rural Development Act	Other funds	Total Federal-grant funds
	Regular formula	Regional research	Total					
Alabama	$1,634,676	$492,876	$2,127,552	$247,117	$1,666,379	$27,948	-	$4,068,996
Alaska	434,658	62,900	498,550	122,626	-	7,340	-	628,524
Arizona	586,793	357,065	943,858	113,050	152,000	10,478	-	1,219,386
Arkansas	1,367,265	312,912	1,680,197	223,176	685,629	24,529	-	2,613,531
California	1,697,054	681,639	2,378,691	251,905	309,300	32,862	-	2,972,760
Colorado	760,579	481,322	1,241,901	132,202	177,600	15,092	-	1,566,795
Connecticut	645,416	239,541	884,957	79,531	65,600	12,920	-	1,043,010
Delaware	467,062	188,633	655,695	41,229	302,510	7,908	-	1,007,342
District of Columbia	241,518	500	242,018	-	-	-	-	242,018
Florida	1,033,134	237,185	1,270,319	194,448	788,226	21,925	-	2,274,918
Georgia	1,756,190	552,002	2,308,192	256,693	837,654	32,135	-	3,484,674
Guam	295,515	28,326	323,841	-	-	-	-	323,841
Hawaii	472,807	177,608	650,415	65,169	75,000	7,392	-	797,976
Idaho	700,261	294,644	995,005	170,507	255,467	14,215	-	1,435,194
Illinois	1,971,674	440,907	2,412,581	141,780	331,020	47,489	-	2,932,870
Indiana	1,775,979	417,728	2,193,707	136,991	72,000	43,813	-	2,446,511
Iowa	1,831,590	604,880	2,436,470	98,686	454,800	83,716	-	3,073,672
Kansas	1,192,157	348,862	1,541,019	60,381	112,000	26,419	-	1,739,819
Kentucky	1,909,476	382,434	2,291,910	156,143	941,725	41,640	-	3,431,418
Louisiana	1,249,611	283,430	1,533,041	232,753	828,436	23,537	-	2,617,767
Maine	653,015	257,602	910,617	213,600	72,000	11,585	-	1,207,802
Maryland	873,226	306,745	1,179,971	93,898	454,944	17,723	-	1,746,536
Massachusetts	772,035	310,184	1,082,219	108,262	138,800	14,871	-	1,344,152
Michigan	1,542,782	361,291	2,214,073	218,388	306,100	42,727	-	2,781,288
Minnesota	1,741,923	385,726	2,127,649	180,083	141,600	43,516	-	2,492,848
Mississippi	1,718,739	371,059	2,089,798	237,541	977,218	66,546	-	3,371,095
Missouri	1,760,367	378,913	2,139,280	165,719	1,101,177	39,131	-	3,445,307
Montana	667,475	329,465	996,940	160,931	80,000	13,518	-	1,251,389
Nebraska	1,084,791	384,731	1,469,522	55,591	213,720	24,783	-	1,763,538
Nevada	428,668	181,022	609,688	46,017	78,400	7,166	-	741,271
New Hampshire	520,305	190,053	710,358	127,414	78,400	9,298	-	825,470
New Jersey	755,391	473,110	1,228,501	74,745	50,000	14,898	-	1,360,144
New Mexico	610,165	198,492	808,657	84,321	72,000	10,802	-	975,780

New York	1,835,299	690,281	2,525,580	227,964	473,100	78,037		3,304,681
North Carolina	2,598,246	518,865	3,117,111	242,329	1,207,068	52,593		4,619,101
North Dakota	834,289	290,440	1,124,729	31,652	103,200	17,737		1,277,318
Ohio	2,186,858	395,159	2,582,017	146,567	168,800	50,843		2,948,227
Oklahoma	1,192,710	264,744	1,457,454	117,838	753,072	23,336		2,351,700
Oregon	871,635	476,742	1,348,377	261,481	252,865	55,455		1,918,178
Pennsylvania	2,253,828	535,800	2,789,628	199,236	196,000	49,096		3,233,960
Puerto Rico	1,845,540	356,225	2,201,765			34,225		2,235,990
Rhode Island	438,530	201,115	639,645	36,440		7,119		683,204
South Carolina	1,418,070	306,103	1,724,173	184,872	767,277	24,517		2,700,839
South Dakota	841,743	295,118	1,136,861	50,805	212,800	18,560		1,419,026
Tennessee	1,916,355	387,543	2,303,898	175,295	876,473	38,662		3,394,328
Texas	2,446,171	521,993	2,968,164	208,812	1,343,749	48,565		4,569,290
Utah	541,488	349,685	891,173	89,110	72,000	9,264		1,061,547
Vermont	551,668	152,437	704,105	103,474	128,000	10,114		946,493
Virginia	1,568,971	350,206	2,009,177	204,024	780,171	32,386		3,025,758
Virginia Islands	250,965	3,000	253,965	13,959				267,924
Washington	994,906	618,126	1,613,032	266,269	66,668	20,705		1,966,674
West Virginia	1,093,699	243,243	1,336,942	151,355		18,765		1,507,062
Wisconsin	1,755,823	469,944	2,225,767	189,660	140,460	43,317		2,599,204
Wyoming	499,155	278,440	777,595	69,957	100,800	8,862		957,214
Other					33,000			33,000
Subtotal	63,489,244	18,419,116	81,908,360	7,462,000	19,546,000	1,440,000		110,356,360
Committee of 9 (travel)		12,000	12,000					12,000
Unobligated balance	214,064	19,447	233,511					233,511
Subtotal	63,703,308	18,450,563	82,153,871	7,462,000	19,546,000	1,440,000		110,601,871
Federal administration:								
Hatch funds (3 pct)			1,892,683					1,892,683
Unobligated balance			411,446					411,446
Rural development funds (4 pc.)						30,000		30,000
Unobligated balance						30,000		30,000
Appropriation (direct)							$1,018,000	1,018,000
Subtotal			2,304,129			60,000	1,018,000	3,382,129
Penalty hall			470,940					470,940
Unobligated balance			5,060					5,060
Grand total	63,703,308	18,450,563	84,934,000	7,462,000	19,546,000	1,500,000	1,018,000	114,460,000

TABLE 1.—DISTRIBUTION OF FEDERAL PAYMENTS TO STATES FOR RESEARCH AT STATE AGRICULTURAL EXPERIMENT STATIONS AND OTHER STATE INSTITUTIONS—FISCAL YEAR 1977

State	Hatch Act, as amended			Cooperative forestry research (M–S)	1890 colleges and Tuskegee Institute	Grants for agricultural research	Rural Development Act	Other funds	Total Federal-grant funds
	Regular formula	Regional research	Total						
Alabama	$1, 834, 828	$588, 127	$2, 422, 955	$273, 386	$1, 673, 046	$17, 004	$27, 948	---	$4, 414, 339
Alaska	494, 180	75, 549	569, 729	134, 957	---	8, 156	7, 340	---	720, 182
Arizona	666, 880	406, 688	1, 073, 568	103, 012	---	210, 336	10, 478	---	1, 397, 394
Arkansas	1, 543, 948	384, 866	1, 928, 814	252, 090	720, 003	302, 028	24, 529	---	3, 227, 464
California	1, 930, 963	856, 256	2, 787, 219	278, 710	---	485, 274	32, 862	---	3, 584, 065
Colorado	872, 393	512, 223	1, 384, 616	150, 930	---	14, 292	15, 092	---	1, 564, 930
Connecticut	745, 936	272, 230	1, 018, 166	92, 363	---	11, 438	12, 920	---	1, 134, 887
Delaware	529, 494	204, 873	734, 367	49, 770	314, 397	9, 522	7, 908	---	1, 115, 964
District of Columbia	11, 678	31, 107	42, 785	---	---	---	---	---	42, 785
Florida	1, 194, 917	334, 390	1, 529, 307	220, 145	539, 280	274, 500	21, 925	---	2, 585, 157
Georgia	1, 985, 098	578, 142	2, 563, 240	284, 035	884, 762	127, 178	32, 135	---	3, 891, 350
Guam	143, 825	39, 828	183, 653	---	---	8, 072	---	---	191, 725
Hawaii	544, 774	205, 880	750, 654	65, 742	---	86, 452	7, 392	---	910, 240
Idaho	806, 088	338, 919	1, 145, 007	182, 875	---	131, 613	14, 215	---	1, 473, 710
Illinois	2, 312, 689	530, 985	2, 843, 674	156, 253	---	105, 382	47, 489	---	3, 152, 798
Indiana	2, 085, 228	485, 787	2, 571, 015	140, 281	---	25, 910	43, 813	---	2, 781, 019
Iowa	2, 157, 446	694, 011	2, 851, 457	97, 687	---	422, 202	83, 716	---	3, 455, 062
Kansas	1, 381, 842	408, 032	1, 789, 874	71, 067	---	22, 756	26, 419	---	1, 910, 116
Kentucky	2, 200, 767	451, 372	2, 652, 139	177, 550	906, 435	13, 844	41, 640	---	3, 791, 608
Louisiana	1, 419, 435	355, 494	1, 774, 929	257, 413	655, 218	19, 342	23, 537	---	2, 730, 439
Maine	740, 706	285, 469	1, 026, 175	230, 793	---	11, 736	11, 585	---	1, 280, 289
Maryland	1, 003, 098	350, 584	1, 353, 682	113, 660	475, 777	11, 766	17, 723	---	1, 972, 608
Massachusetts	883, 372	345, 396	1, 228, 768	118, 985	---	54, 666	14, 871	---	1, 417, 290
Michigan	2, 154, 498	472, 142	2, 626, 640	241, 441	---	170, 440	42, 727	---	3, 081, 248
Minnesota	2, 049, 193	470, 658	2, 519, 851	198, 848	---	288, 761	43, 516	---	3, 050, 976
Mississippi	1, 926, 467	447, 899	2, 374, 366	268, 062	877, 305	100, 516	66, 546	---	3, 686, 795
Missouri	2, 037, 457	427, 063	2, 464, 520	193, 523	831, 746	391, 480	39, 131	---	3, 920, 400
Montana	768, 483	358, 624	1, 127, 107	166, 902	---	13, 030	13, 518	---	1, 320, 557
Nebraska	1, 262, 718	481, 551	1, 744, 269	60, 418	---	233, 000	24, 703	---	2, 062, 390
Nevada	486, 004	196, 725	682, 729	33, 797	---	8, 946	7, 166	---	772, 638
New Hampshire	591, 924	193, 632	785, 556	145, 605	---	8, 824	9, 298	---	949, 283
New Jersey	865, 833	559, 338	1, 425, 171	87, 039	---	412, 694	14, 898	---	1, 939, 802
New Mexico	692, 587	217, 562	910, 149	108, 336	---	10, 794	10, 802	---	1, 040, 081
New York	2, 121, 916	829, 226	2, 951, 142	246, 765	---	357, 146	78, 037	---	3, 633, 090
North Carolina	2, 967, 784	635, 778	3, 603, 562	262, 738	1, 203, 444	378, 714	52, 593	---	5, 501, 051

North Dakota	964, 316	326, 601	1, 290, 917	39, 121		40, 772	17, 737			1, 388, 547
Ohio	2, 544, 377	499, 528	3, 043, 905	161, 578		413, 698	50, 843			3, 670, 024
Oklahoma	1, 361, 201	317, 919	1, 679, 120	129, 633	629, 001	17, 438	23, 336			2, 478, 528
Oregon	1, 003, 122	520, 079	1, 523, 201	289, 359		408, 378	55, 455			2, 276, 393
Pennsylvania	2, 598, 232	639, 976	3, 238, 208	204, 172		17, 108	49, 096			3, 508, 584
Puerto Rico	2, 088, 508	410, 362	2, 499, 270				34, 225			2, 533, 495
Rhode Island	495, 382	214, 458	709, 840	44, 445		8, 454	7, 119			769, 858
South Carolina	1, 594, 620	366, 405	1, 961, 025	214, 820	734, 451	17, 224	24, 517			2, 952, 037
South Dakota	977, 428	335, 567	1, 312, 995	55, 093		14, 614	18, 560			1, 401, 262
Tennessee	2, 190, 192	458, 097	2, 648, 289	188, 198	922, 048	16, 520	38, 662			3, 813, 717
Texas	2, 788, 060	642, 524	3, 430, 584	225, 468	1, 164, 993	143, 464	48, 565			5, 013, 074
Utah	613, 244	379, 866	993, 110	81, 715		10, 206	9, 264			1, 094, 295
Vermont	630, 614	177, 628	808, 242	124, 308		8, 778	10, 114			951, 442
Virginia	1, 889, 620	415, 759	2, 305, 379	236, 117	820, 094	107, 252	32, 386			3, 501, 228
Virgin Islands	106, 887	62, 805	169, 692							169, 692
Washington	1, 145, 282	727, 374	1, 872, 656	294, 683		246, 850	20, 705			2, 434, 894
West Virginia	1, 232, 728	283, 772	1, 516, 500	172, 226		8, 700	18, 765			1, 716, 191
Wisconsin	2, 061, 698	562, 387	2, 624, 085	209, 496		23, 314	43, 317			2, 900, 212
Wyoming	563, 076	289, 416	852, 492	76, 390		9, 416	8, 862			947, 160
Other						50, 000				50, 000
Subtotal	72, 263, 436	21, 656, 929	93, 920, 365	8, 212, 000	13, 352, 000	6, 310, 000	1, 440, 000			123, 234, 365
Committee of 9 (travel)		9, 730	9, 730							9, 730
Unobligated balance	871, 152	58, 654	929, 806							929, 806
Subtotal	73, 134, 588	21, 725, 313	94, 859, 901	8, 212, 000	13, 352, 000	6, 310, 000	1, 440, 000			124, 173, 901
Federal administration:										
Hatch funds (3 pct)			2, 286, 108							2, 286, 108
Unobligated balance			410, 991							410, 991
Rural development funds (4 pct)							60, 000			60, 000
Direct appropriation									$1, 675, 000	1, 675, 000
Subtotal			2, 697, 099				60, 000		1, 675, 000	4, 432, 099
Penalty mail			413, 716							413, 716
Unobligated balance			2, 284							2, 284
Subtotal			416, 000							416, 000
Grand total	73, 134, 588	21, 725, 313	97, 973, 000	8, 212, 000	13, 352, 000	6, 310, 000	1, 500, 000		1, 675, 000	129, 022, 000

APPENDIX V

***Question** 8.* Identify the distribution of Title V funds by State, including all participating educational institutions since FY 1972.

Response. Title V of the Rural Development Act of 1972 was initially funded in FY 1974. The distribution of funds to States for fiscal years 1974 through 1978 is shown in the table below.

State	Fiscal year 1974 initial funding	Fiscal year 1975	Fiscal year 1976 (includes 5th quarter change in fiscal year dates)	Fiscal year 1977	Fiscal year 1978
Alabama	$55, 896	$55, 896	$69, 870	$55, 896	$74, 528
Alaska	14, 680	14, 680	18, 350	14, 680	19, 573
Arizona	20, 956	20, 956	26, 196	20, 956	27, 941
Arkansas	49, 058	49, 058	61, 322	49, 058	65, 411
California	65, 724	65, 724	82, 156	65, 724	87, 632
Colorado	30, 184	30, 184	37, 730	30, 184	40, 245
Connecticut	25, 840	25, 840	32, 300	25, 840	34, 453
Delaware	15, 816	5, 816	19, 770	15, 816	21, 088
Florida	43, 850	43, 850	54, 812	43, 850	58, 467
Georgia	64, 270	64, 270	80, 338	64, 270	85, 693
Hawaii	14, 784	14, 784	18, 480	14, 784	19, 712
Idaho	28, 430	28, 430	35, 538	28, 430	37, 906
Illinois	94, 978	94, 978	118, 722	94, 987	126, 637
Indiana	87, 626	87, 626	109, 532	87, 626	116, 835
Iowa	92, 432	92, 432	115, 540	92, 432	123, 234
Kansas	52, 838	52, 838	66, 048	52, 838	70, 451
Kentucky	83, 280	83, 280	104, 100	83, 280	111, 040
Louisiana	47, 074	47, 074	58, 842	47, 074	62, 765
Maine	23, 170	23, 170	28, 962	23, 170	30, 893
Maryland	35, 446	35, 446	44, 308	35, 446	47, 262
Massachusetts	29, 742	29, 742	37, 178	29, 742	39, 656
Michigan	85, 454	85, 454	106, 818	85, 454	113, 954
Minnesota	87, 032	87, 032	108, 790	87, 032	116, 043
Mississippi	58, 092	58, 092	72, 614	58, 092	77, 456
Missouri	78, 262	78, 262	97, 828	78, 262	104, 350
Montana	27, 036	27, 036	33, 796	27, 036	36, 048
Nebraska	49, 406	49, 406	61, 758	49, 406	65, 875
Nevada	14, 332	14, 332	17, 914	14, 332	19, 110
New Hampshire	18, 596	18, 596	23, 244	18, 596	24, 795
New Jersey	29, 796	29, 796	37, 244	29, 796	39, 728
New Mexico	21, 604	21, 604	27, 004	21, 604	28, 805
New York	81, 074	81, 074	101, 342	81, 074	108, 099
North Carolina	105, 186	105, 186	131, 482	105, 186	140, 240
North Dakota	35, 474	35, 474	44, 342	35, 474	47, 298
Ohio	101, 686	101, 686	127, 108	101, 686	135, 581
Oklahoma	46, 672	46, 672	58, 340	46, 672	62, 229
Oregon	35, 910	35, 910	44, 888	35, 910	47, 880
Pennsylvania	98, 192	98, 192	122, 740	98, 192	130, 922
Puerto Rico	68, 450	68, 450	85, 562	68, 450	91, 267
Rhode Island	14, 238	14, 238	17, 798	14, 238	18, 984
South Carolina	49, 034	49, 034	61, 292	49, 034	65, 378
South Dakota	37, 120	37, 120	46, 400	37, 120	49, 493
Tennessee	77, 324	77, 324	96, 656	77, 324	103, 099
Texas	97, 130	97, 130	121, 412	97, 130	129 507
Utah	18, 528	18, 528	23, 160	18, 528	24, 704
Vermont	20, 228	20, 228	25, 286	20, 228	26, 971
Virginia	64, 772	64, 772	80, 966	64, 772	86, 363
Washington	41, 410	41, 410	51, 762	41, 410	55, 213
West Virginia	37, 530	37, 530	46, 912	37, 530	50, 040
Wisconsin	86, 634	86, 634	108, 292	86. 634	115, 517
Wyoming	17, 724	17, 724	22, 156	17, 724	23, 632

As is indicated in the report "An Evaluation of Title V of the Rural Development Act of 1972," 122 institutions other than land-grant have been involved in Title V programs. The amount of funds transferred to or spent in support of efforts with non-land grant institutions is a matter of State rather than Federal records. Generating a national summary of this information would require surveying all the States and Puerto Rico.

APPENDIX VI

Question 9. Provide a breakdown of Extension Service, in-house administrative budget, listing number of employees and total dollars allocated to non-farm rural development. If possible, identify the major activities conducted by Extension which pertains to rural development.

Response. The SEA-Extension in-house administrative staff assigned to non-farm rural development (community resource development) and the major activities of these staff are listed below:

John S. Bottum, Assistant Administrator, Rural Development.

Dorris W. Rivers, CRD program reviews, special projects, Title IX, clergy continuing education, State rural development committees.

John R. Fernstrom, Program Leader, Economic development rural industrial development, water, sewer, solid waste.

Marvin E. Konyha, Program Leader, Manpower Development, housing health, transportation.

Karl F. Munson, Program Leader, Recreation, tourism, leisure education, 4–H/CRD.

William V. Neely, Program Leader, Public affairs, land-use policy, comprehensive planning, State and local government finance and operations, RC&D, energy policy.

Howard C. Tankersley, Program Leader, Community Organization, leadership development, Title V, CRD process, program planning and evaluation.

Donald L. Nelson, Rural Development Information Specialist, rural development information and community communications and public information.

SEA-Extension in-house expeditures in support of non-farm rural development (Community Resource Development) total an estimated $800,000 or about 8 to 9 percent of the administrative budget annually. This includes total costs of the staff above, summer internships for students preparing to work in Community Resource Development, special innovative projects to move CRD forward in the States and a proportionate share of total administrative and overall management costs.

Question 10. Provide a breakdown of the Cooperative Extension System for each State and Puerto Rico listing the portion of their respective budgets allocated to non-farm, rural development.

Response. Based on findings in a May 1977 study titled "Extension Impacts," an estimated 25 percent of all Federal funds available to Extension in FY 78 will be expended for rural development programs—programs that help to improve the economic opportunity and the quality of living in rural America. These include programs that help local people provide increased economic opportunity; programs that help local citizens improve the environment and conserve their natural resources; and programs that encourage and facilitate citizen participation in community decisionmaking and local governing processes to improve community facilities and services. Clientele or audiences served in these programs are both farm and non-farm groups and individuals. According to FY 78 Extension plans of work from State Cooperative Extension Services, 8.55% of all professional staff years will be devoted to non-farm rural development (Community Resource Development) programs. Federal support for this effort will total approximately $20 million. This support comes from $1 million special earmarked funds under Section 3(d) of the Smith-Lever Act, $16 million from payments available to States under Section 3(c) of the Act, and the $2.5 million available under Title V of the Rural Development Act of 1972. Because of the formula requirement in determining each State's funding entitlement, Section 3(c) funds are distributed to the States without specific program designation. The following table breaks out the planned allocation of professional staff years to non-farm rural development, by States, for FY 78.

STATE COOPERATIVE EXTENSION SERVICES PLANNED ALLOCATION OF PROFESSIONAL STAFF YEARS ON NONFARM RURAL DEVELOPMENT AS INDICATED IN FISCAL YEAR 1978 STATE PLANS OF WORK

State	Staff years	Percent of total staff years
Alabama	31.2	6.5
Arizona	2.3	9.0
Arkansas	7.7	5.3
California	22.4	4.4
Colorado	28.3	12.1
Connecticut	8.6	9.5
Delaware	2.5	5.2
D.C	10.5	20.4
Florida	30.8	7.2
Georgia	66.0	10.2
Hawaii	2.3	2.8
Idaho	22.7	13.1
Illinois	38.0	6.8
Indiana	25.0	5.6
Iowa	65.0	14.0
Kansas	30.9	6.7
Kentucky	40.0	8.3
Louisiana	33.9	7.1
Maine	12.3	14.3
Maryland	16.4	7.1
Massachusetts	24.5	12.1
Michigan	40.3	10.0
Minnesota	46.2	10.4
Mississippi	18.5	4.1
Missouri	97.7	18.5
Montana	12.0	8.4
Nebraska	11.0	3.6
Nevada	6.0	8.2
New Hampshire	5.7	7.0
New Jersey	19.5	13.5
New Mexico	15.7	10.7
New York	66.6	10.1
North Carolina	49.0	5.8
North Dakota	9.2	5.4
Ohio	25.6	6.0
Oklahoma	14.8	4.0
Oregon	14.4	5.7
Pennsylvania	42.0	9.2
Puerto Rico	24.6	9.8
Rhode Island	3.9	8.2
South Carolina	19.4	5.0
South Dakota	14.1	7.2
Tennessee	28.6	5.2
Texas	51.5	4.8
Utah	10.8	9.6
Vermont	9.5	10.7
Virgin Islands	1.1	20.4
Washington	18.1	9.5
West Virginia	33.9	14.9
Wisconsin	90.9	18.7
Wyoming	7.6	8.0

APPENDIX VII

Question 11. Characteristics of CSRS research projects.

Question 11a. List the total number of projects and SY's for each category. If possible through the use of the computer please provide a summary total of the disciplinary orientation of participation scientists by fraction of SMY involvement.

Response. See following three tables. In addition a bound set of rural development projects administered by CSRS have been furnished the committee (computer printouts of 375 projects). A second bound document containing the titles, funding, researcher, experiment station affiliation has also been furnished the committee.

Question 11b. List all research projects by key word which directly or indirectly apply to the category of rural development. Total the number of projects for each key word.

Response. See the following table.

Question 11c. List all RPA's and their totals included in rural development research.

Response. See the following table.

SCIENTIST YEARS FOR SELECTED DISCIPLINES, 1970-76

Disciplines	1970	1971	1972	1973	1974	1975	1976
Economics	502.9	501.9	517.1	529.1	537.0	534.5	564.8
Sociology	91.8	103.1	118.1	123.0	122.6	133.1	134.4
Anthropology	.5	.5	.4	1.1	1.2	1.1	1.7
Education	37.3	30.4	36.4	41.9	33.8	34.4	42.7
History	.9	1.2	.2	.2	.8	1.0	1.3
Information-communication	4.1	.8	11.0	14.1	17.0	14.1	20.1
Law	1.9	3.0	2.5	3.3	3.0	3.3	2.3
Political science	1.3	1.8	2.7	1.5	3.1	3.0	3.5
Psychology	13.5	10.1	11.8	16.3	19.5	20.2	36.7
Total	654.20	652.80	700.20	730.50	738.00	744.70	807.50

UTILIZATION OF SCIENTIST PROFESSIONAL AND TECHNICAL RESOURCES IN SOCIOLOGY AND AGRICULTURAL ECONOMICS, 1970-76

Year	Scientist years	Professional years	Technical years	Total years
Sociology:				
1970	91.8	94.9	24.1	210.80
1971	103.1	110.9	30.1	244.10
1972	118.1	107.7	40.9	266.70
1973	123.0	106.2	43.1	272.30
1974	122.6	115.3	51.7	289.60
1975	133.1	138.0	54.8	325.90
1976	134.4	113.7	48.3	296.40
Agricultural economics:				
1970	502.9	465.8	100.6	1,069.30
1971	501.9	460.6	112.8	1,075.30
1972	517.1	449.4	149.5	1,116.00
1973	529.1	465.4	149.8	1,144.30
1974	537.0	426.0	168.7	1,131.70
1975	534.5	448.0	160.8	1,143.30
1976	564.8	460.3	152.1	1,177.20

NUMBER OF PRODUCTS BY SELECTED DISCIPLINES, 1970-76

Disciplines	1970	1971	1972	1973	1974	1975	1976
Economics	1,700	1,484	1,451	1,464	1,437	1,516	1,718
Sociology	362	351	364	366	391	423	470
Anthropology	8	6	4	6	5	7	8
Education	99	93	105	108	110	126	142
History	4	4	4	4	5	7	8
Information-communication	14	23	36	45	59	78	89
Law	20	20	20	19	16	11	14
Political science	16	18	17	18	17	17	21
Psychology	84	83	78	92	92	104	126
Total	2,307	2,082	2,079	2,122	2,132	2,289	2,596

Current Research Information System Key Words in Development

Key word:	Number of projects	Key word:	Number of projects
Aging	99	Public administration	6
Air pollution	221	Public affairs	3
Air quality	9	Public facilities	6
American Indians	5	Public health	37
Banking services	2	Public policies	135
Blacks	17	Public services	87
Communities	162	Recreation	262
Community development	165	Regional development	25
Community groups	1	Regional economy	15
Community growth	11	Regional growth	7
Community involvement	1	Regional planning	23
Community leaders	10	Regional research	17
Community planning	4	Regional studies	21
Community preferences	1	Resource planning	96
Community problems	10	Resource management	146
Community relations	6	Rural communities	251
Community sentiments	3	Rural development	389
Community services	121	Rural education	16
Community size	5	Rural elderly	1
Community structure	23	Rural families	119
Community viability	13	Rural health	17
Delivery systems	30	Rural housing	37
Disadvantaged families	22	Rural industry	7
Economic development	150	Rural institutions	11
Education	310	Rural land	13
Employment	172	Rural life	12
Environmental quality	89	Rural occupations	15
Equity	19	Rural organizations	7
Family income	59	Rural population	62
Housing	115	Rural poverty	29
Human development	78	Services	215
Income	345	Social change	58
Income distribution	39	Social organization	65
Industry	108	Social structure	33
Industrial development	4	Social values	15
Industrial location	15	Towns	8
Institutions	126	Tourism	14
Land use	376	Underemployment	5
Land use planning	95	Unemployment	22
Local government	47	Urban development	9
Local organizations	3	Utilities	7
Low income families	109	Values	92
Low income housing	14	Waste management	157
Migration	125	Water management	185
Population distribution	37	Welfare	15
Poverty	93	Zoning	14

RURAL DEVELOPMENT RPA's—1976

Research goals	Research problem areas	Commodity	Number of projects	Scientist years	State funds (thousands)	Current research administration funds (thousands)
VIII. Assist rural Americans improve their level of living	801 Housing	All	51	13.8	$270	$296
	802 Individual and family decisionmaking.	All	140	35.9	841	728
	803 Rural poverty	All	47	9.5	240	370
	804 Economic potential of rural people	All	112	31.1	541	828
	805 Communication and education of rural people.	All	128	39.8	1,406	550
	806 Adjustment to change	All	164	44.4	1,298	770
IX. Promote community improvement, including: Development of beauty, recreation environment, economic opportunity, and public services.	902 Outdoor recreation	500 Recreation resources	174	45.7	1,258	859
	907 Rural income improvement	4000 People as individuals	54	7.0	2,503	155
		4100 Family members	7	1.5		15
		4300 Social-political organizations	160	42.5		1,011
	908 Improvement of institutions	4300 Social-political organizations	310	92.9	2,180	2,242
Total			1,347	364.1	10,537	7,824

Note.—Other rural development goals related to the natural resources area have been excluded from the above estimates. Such RPA's as land-water use; environment and pollution abatement; and quality of life can be estimated to add an additional 400 projects and approximately 360 SY's to the above total.

Appendix VIII

Question 12. Food and Agricultural Act of 1977.

Membership of Joint Council on Food and Agricultural Science. Membership on National Agricultural Research and Extension Users Advisory Committee.

Response. The Joint Council on Food and Agricultural Science has been formed (see attachment).

The National Agricultural Research and Extensions Users Advisory Board has not been established as of this date.

Question 13. Provide a report of the recent efforts to comply with section 1412a of the Food and Agriculture Act of 1977.

Response. As of the present time an interim acting director has been appointed but no staff have been appointed to this support group.

Section 1407: Food and Agriculture Act of 1977

Joint Council on Food and Agricultural Sciences

The new Joint Council on Food and Agricultural Sciences—called for in the National Agricultural Research, Extension, and Teaching Policy Act of 1977—has now been formed. The non-USDA members are: *Charles M. Smallwood*, dean of the school of agriculture, West Texas State University, Canyon, TX; *Harold F. Robinson*, chancellor, Western Carolina University, Cullowhee, NC; *John S. Robins*, dean, College of Agriculture, Washington State University, Pullman; *Richard D. Morrison*, president, Alabama A&M University, Normal, AL; *John P. Mahlstede*, associate director, Agricultural and Home Economics Experiment Station, Iowa State University, Ames; *R. James Hildreth*, managing director, Farm Foundation, Oak Brook, IL. *John L. Gerwig*, director-dean of extension, Cook College, Rutgers University, New Brunswick, NJ; *Emery N. Castle*, vice president and senior fellow, Resources for the Future, Washington, DC; *A. R. Baldwin*, vice president and executive director, Cargill Inc., Minneapolis, MN; *Doris H. Calloway*, professor of nutrition, University of California, Berkeley; *Charles B. Browning*, dean for resident instruction, Institute of Food and Agricultural Sciences, University of Florida, Gainesville; and *Philip M. Smith*, assistant director, Natural Resources and Commercial Services, President's Office of Science and Technology Policy.

USDA members of the Joint Council are: Assistant Secretary, *M. Rupert Cutler*, chairman; *R. J. Aldrich*, Acting Deputy Director, SEA-CR; *R. E. Buckman*, Deputy Chief for Research, FS; *T. W. Edminster*, Acting Deputy Director SEA-FR; *R. A. Farley*, Acting Deputy Director, SEA-TIS; *K. R. Farrell*, Acting Administrator, ESCS; *James Nielson*, Interim Acting Director, SEA; and *W. N. Schaller*, Acting Deputy Director, SEA-E.

The Joint Council will be responsible for fostering "coordination of the agricultural research, extension, and teaching activities of the Federal Government, the States, colleges and universities, and other public and private institutions and persons involved in the food and agricultural sciences." The first meeting will take place in Washington, D.C., April 27–28.

Appendix IX

Question 14a. Please list the totals by topics and location of competitive grants awarded to the field of rural development.

Response. The only competitve grants awarded by the cooperative State research service came through the establishing of the regional rural development centers using PL89–106 grant funds. An initial amount of $300,000 was set aside for this purpose with each of the four centers receiving $75,000 each. This funding has been continued through FY78.

Question 14b. In regard to the FY79 budget, approximate the number of competitive grants which will be awarded in the field of rural development.

Response. The proposed FY79 budget has deleted the PL89–106 funding to the regional rural development centers. Resources are available from formula grants made to the states.

Appendix X

Question 15. Provide a list of all members of the four regional planning committees.

Response. See attached listings by region.

Question 16. Provide a list of all members of ARPAC since 1974.

Response. The Food and Agriculture Act of 1977 established two advisory committees to the Department of Agriculture (Sections 1407, 1408—see question 12) which serve to replace the ARPAC committee.

NORTHEAST REGIONAL PLANNING COMMITTEE (NEPRC)

USDA

Dr. Steven C. King, Co-Chairman, USDA, FR, SEA, Room 333, Building 003, Agricultural Research Center, West, Beltsville, Md. 20705. (301/344-3418)

Dr. Horace L. Puterbaugh, USDA, FR, SEA, Room 313, Building 003, Agricultural Research Center, West, Beltsville, Md. 20705. (301/344-2783)

Mr. F. Bryan Clar, Deputy Director, N.E. Forestry Experiment Station, USDA Forest Service, 6818 Market Street, Upper Darby, Pa. 19082. (215/596-1615)

Dr. Thomas S. Ronningen, Acting Associate Deputy Director, Cooperative Research, SEA, Room 412-A, Admin. Bldg., Washington, D.C. 20250. (202/447-7441)

Dr. Kenneth L. Deavers, USDA, ESCS, Room 460, 500 12th Street, S.W., Washington, D.C. 20250. (202/447-8225)

ARI

Dr. Gilbert H. Porter, Vice President, Research and Development, Agway, Inc., 333 Butternut Drive, Dewitt, N.Y. 13203. (315/447-6395)

ASCUFRO

Dr. Hugo H. John, Director, School of Natural Resources, University of Vermont, Burlington, Vt. 05401. (802/656-4280)

1890 Colleges

Mr. U. S. Washington, Department of Agriculture and Natural Resources, Delaware State College, Dover, Del. 19901.

SAES

Dr. Walter I. Thomas, Assoc. Dir.—Co-Chairman, Agricultural Experiment Station, 229 Agricultural Admin. Bldg., The Pennsylvania State University, University Park, Pa. 16802. (814/865-5419)

Dr. H. R. Fortmann, Regional Coordinator, 229-B Agricultural Admin. Bldg., The Pennsylvania State University, University Park, Pa. 16802. (Pa.—814/865-5222—D.C. 202/388-6489)

Committee of Three

Dr. D. W. Zinn, Director, Agricultural Experiment Station, West Virginia University, Morgantown, W. Va. 26506. (304/293-2395)

Dr. Harry D. Brown, Associate Director, Agricultural Experiment Station, Rutgers University, P.O. Box 231, New Brunswick, N.J. 08903. (201/932-9447)

Dr. Joan R. Egner, Associate Director, Agricultural Experiment Station, Cornell University, Ithaca, N.Y. 14853.

Home Economics

Dr. Margaret Thornberry, School of Human Development, University of Maine, Orono, Maine 04473. (207/581-7174)

ESCOP

Director Thomas W. Dowe, Agricultural Experiment Station, University of Vermont, Burlington, Vt. 05401. (802/656-2980)

Extension

Dr. R. Rudy Filek, Associate Director, Center for Extension and Continuing Education, West Virginia University, Morgantown, W. Va. 26506. (304/293-5691)

SOUTHERN RESEARCH PLANNING COMMITTEE (SRPC)

USDA Representatives

Dr. Arthur W. Cooper, Deputy Administrator, Southern Region, ARS, USDA, P.O. Box 53326, New Orleans, La. 70153. A/C 504 589-6753 (FTS: 682-6753)

Dr. Laurence E. Lassen, Director, Southern Forest Experiment Station, FS, 701 Loyola Ave., Room 10210, New Orleans, La. 70113. A/C 504 589-6787 (FTS: 682-6787)

Dr. Clare I. Harris, Deputy Administrator CSRS, USDA, Washington, D.C. 20250. A/C 202 447-4587 (FTS: same as commercial number). (NOTE: Did not attend November mtg).

Dr. Charles R. Swanson, Asst. to Deputy Administrator, ST, Program, Planning and Review, ARS–USDA, P.O. Box 53326, New Orleans, La. 70153. A/C 504 589-6333 or 6339 (FTS: 682-6333 or 6339)

Dr. John G. Stovall, Associate Director, Commodity Economics Division, ERS–USDA, Washington, D.C. 20250. A/C 202 447-8860 (FTS: same as commercial number)

Mr. O. Wendell Holmes (Alternate), ERS, USDA, NEAD, Col. of Agric., 205 Filley Hall, East Campus, University of Nebraska, Lincoln, Nebr. 68583. A/C 402 471-5447 (FTS: 867-5447) (NOTE: Did not attend November mtg)

State Agricultural Experiment Stations

Dr. J. E. Halpin, Director-at-Large, State Agricultural Experiment Station, 104 Barre Hall, Clemson University, Clemson, C.S. 29631. A/C 803 656-3143 (FTS: 672-3143)

Dr. W. K. Porter, Jr., Associate Director, State Agricultural Experiment Station, Mississippi State University, Mississippi State, Miss. 39762. A/C 601 325-4156.

Dr. George J. Kriz, Asst. Director, State Agricultural Experiment Station, North Carolina State University, Raleigh, NC 27607. A/C 919 737-2719

Dr. T. J. Whatley, Assistant Director, Tennessee State Experiment Station, University of Tennessee. Knoxville, Tenn. 37901. A/C 615 974-7123 (FTS: 855-7123)

Dr. H. R. Caffey, Associate Director, Louisiana Agricultural Experiment Station, LSU, Baton Rouge, La. 70803. A/C 504 388-4181

ARI Representative and Alternate

Dr. James E. Marion, Director of Research (Rep.), Gold Kist Research Center, P.O. Box 338, Lithonia, Ga. 30058. A/C 404 482-7466

Mr. J. Ritchie Smith (Alternate), Technical Research Service, National Cotton Council, P.O. Box 12285, Memphis, Tenn. 38112. A/C 901 276-2783

ASCUFRO Representative

Dr. R. G. Merrifield, Head, Department of Forest Sciences, School of Bio-Sciences, Texas A&M, College Station, Tex. 77843. A/C 713 845-5033

1890 Colleges Representative

Dr. F. L. Richards, Research Coord., School of Agriculture, Prairie View A&M College, Prairie View, Tex. 77445. A/C 713 857-3311 (ext. 2811)

Cooperative Extension Service

Mr. John A. Cox, Director, Louisiana Coop. Extension Service, Knapp Hall, LSU, Baton Rouge, La. 70803. A/C 504 344-5271

WESTERN REGIONAL PLANNING COMMITTEE

USDA

Dr. R. Z. Callaham[1] (Co-Chairman), Director, Pacific Southwest Forest and Range Experiment Station, U.S. Forest Service, USDA, P.O. Box 245, Berkeley, CA 94701.

Dr. H. C. Cox,[1] Deputy Administrator, Western Region, Agricultural Research Service, USDA, 2850 Telegraph Ave., Berkeley, CA 94705.

Mr. R. L. Olson, Assistant for PPR, Agricultural Research Service, USDA, 2850 Telegraph Ave., Berkeley, CA 94705.

Dr. L. E. Juers,[1] Economic Research Service, USDA, c/o Dept. of Agricultural Economics, Colorado State University, Fort Collins, CO 80523.

Dr. J. D. Sullivan,[1] Deputy Administrator, Cooperative State Research Service, U.S. Department of Agriculture, Washington, D.C. 20250.

ASCUFRO

Dr. J. H. Ehrenreich, Dean, College of Forestry, Wildlife and Range Sciences, University of Idaho, Moscow, ID 83843.

Industry

Dr. C. E. Geise, Director, Agricultural Research, Del Monte Corp., P.O. Box 36, San Leandro, CA 94577.

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[1] Members of RIC.

SAES

Dr. J. P. Jordan (Co-Chairman), Director, Agricultural Experiment Station, Colorado State University, Fort Collins, CO 80523.

Dr. D. D. Johnson[1] (Chairman, RIC), Deputy Director, Agricultural Experiment Station, Colorado State University, Fort Collins, CO 80523.

Dr. R. J. Miller,[1] Director, Agricultural Experiment Station, University of Idaho, Moscow, ID 83843.

Dr. W. M. Dugger, Jr.,[1] Associate Director, Agricultural Experiment Station, University of Calif., Riverside, CA 92502.

Dr. D. B. Thorud,[1] Associate Director, Agricultural Experiment Station, University of Arizona, Tucson, AZ 85721.

ESCOP—Home Economics Subcommittee

Dr. Betty E. Hawthorne, Dean, School of Home Economics, Oregon State University, Corvallis, OR 97331.

WDAL

Dr. Mark T. Buchanan, Director-at-Large, Western Association of Agricultural Experiment Station Directors, 317 University Hall, University of California, Berkeley, CA 94720.

ECOP

Dr. J. C. Ballard, Vice President for Extension and Continuing Education, Utah State University, Logan, UT 84321.

WRPC Staff

Mr. R. L. Hubbard, Assistant Director, Pacific Southwest Forest and Range Experiment Station, U.S. Forest Service, USDA, P.O. Box 245, Berkeley, CA 94701.

Mr. R. V. Enochian, Officer in Charge, Economic Research Service, Western Regional Research Laboratory, 800 Buchanan Street, Albany, California 94710.

Ms. Jill Moak, Office of Western Director-at-Large, Western Association of Agricultural Experiment Station Directors, 317 University Hall, University of California, Berkeley, CA 94720.

NORTH CENTRAL RESEARCH PLANNING COMMITTEE (NCRPC)

USDA

Earl R. Glover, Deputy Administrator, USDA–ARS, 2,000 W. Pioneer Park, Peoria, IL 61614. 309-671-7176

Kenneth R. Farrell, Economic Research Service, U.S. Department of Agriculture, Washington, O.C. 20250. 202-447-8464

John H. Ohman, Director, North Central Forest Experiment Station, Folwell Avenue, St. Paul, Minnesota 55108. 612-645-0841

Ed. C. Miller, Deputy Administrator, Cooperative State Research Service, U.S. Department of Agriculture, Washington, D.C. 20250. 202-447-7223

Howard Teeter, Assistant, Program Planning and Review, USDA-ARS, 2,000 W. Pioneer Park, Peoria, IL. 61614. 309-671-7172

ARI

Ralph E. Baumhickel, Director, Plant Science, Research and Development, Dow Chemical U.S.A., P.O. Box 1706, Midland, Mich. 48640. 517-636-0875

ASCUFRO

Richard A. Skok, Director, School of Natural Resources, 2120 Fyffe Road, Ohio State University, Columbus, Ohio 43210. 614-422-1279

SAES

G. M. Browning, Regional Director, North Central Agricultural Experiment Station Directors Association, 1°N Curtiss Hall, Iowa State University, Ames, Iowa 50011. 515-294-5717

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[1] Members of RIC.

R. R. Davis, Assistant Director, Ohio Agricultural Research and Development Center, Wooster, Ohio 44691. 216-264-1021

J. A. Hoefer, Associate Director, Agricultural Experiment Station, Michigan State University, East Lansing, Mich. 48823. 517-355-0232

H. R. Lund, Associate Director, Agricultural Experiment Station, North Dakota State University, Fargo, N.D. 58102. 701-237-7654

B. A. Jones, Jr., Associate Director, Agricultural Experiment Station, University of Illinois, Urbana, IL. 61801. 217-333-0241.

Home Economics

Pauline Paul, School of Human Resources and Family Studies, 260 Bezier Hall, University of Illinois, Urbana, IL 61801. 217-333-3791

Veterinary Medicine

Lyle E. Hanson, College of Veterinary Medicine, University of Illinois, Urbana, IL. 61801. 217-333-2449

Extension

Howard G. Diesslin, Director, Agricultural Extension Service, Purdue University, Lafayette, Ind. 47907. 317-749-2413

APPENDIX XI

Question 17. For comparison purposes, please identify the farm and non-farm population for each state. Identify the metropolitan—nonmetropolitan population for each State.

Response: See the following.

Question. For comparative purposes, please identify the farm and nonfarm populations for each state on a metro-nonmetro breakdown.

Answer. Current data are not available on this cross-classified basis. They will be after the 1980 Census. The metropolitan and non-metropolitan populations by State for 1976 are shown on the accompanying table. Estimates of the farm and nonfarm populations are available only for major geological divisions of the country. These figures are as follows for 1976.

[In thousands]

Geographic division	Total	Farm	Nonfarm
United States	214, 658	8, 253	206, 405
New England	12, 221	137	12, 084
Middle Atlantic	37, 282	461	36, 821
East North Central	40, 934	1, 756	39, 178
West North Central	16, 805	2, 044	14, 761
South Atlantic	33, 989	970	33, 019
East South Central	13, 661	1, 088	12, 573
West South Central	21, 203	797	20, 406
Mountain	9, 833	418	9, 415
Pacific	28, 730	582	28, 148

Source: U.S. Bureau of the Census, "Current Population Reports, Series P-25," and U.S. Department of Agriculture, "Farm Population Estimates for 1976, AER No. 383."

STATE POPULATION ESTIMATES BY METROPOLITAN AND NONMETROPOLITAN RESIDENCE, 1976

[In thousands]

State	Population		
	Total	Metropolitan[1]	Nonmetropolitan
United States	214,658	155,901	58,757
New England			
Maine	1,070	324	746
New Hampshire	822	412	410
Vermont	476	----	476
Massachusetts	5,809	5,595	214
Rhode Island	927	847	80
Connecticut	3,117	2,869	248
Middle Atlantic:			
New York	18,084	16,006	2,078
New Jersey	7,336	6,771	565
Pennsylvania	11,862	9,547	2,315
East North Central:			
Ohio	10,690	8,539	2,151
Indiana	5,302	3,403	1,899
Illinois	11,229	9,034	2,195
Michigan	9,104	7,413	1,691
Wisconsin	4,609	2,647	1,962
West North Central:			
Minnesota	3,965	2,505	1,460
Iowa	2,870	1,073	1,797
Missouri	4,778	3,034	1,744
North Dakota	643	82	561
South Dakota	686	101	585
Nebraska	1,553	694	859
Kansas	2,310	993	1,317
South Atlantic:			
Delaware	582	401	181
Maryland	4,144	3,524	620
District of Columbia	702	702	----
Virginia	5,032	3,298	7,734
West Virginia	1,821	661	1,160
North Carolina	5,469	2,481	2,988
South Carolina	2,848	1,375	1,473
Georgia	4,970	2,824	2,146
Florida	8,421	7,026	1,394
East South Central:			
Kentucky	3,428	1,560	1,868
Tennessee	4,214	2,515	1,699
Alabama	3,665	2,266	1,399
Mississippi	2,354	515	1,839
West South Central:			
Arkansas	2,109	660	1,449
Louisiana	3,841	2,429	1,412
Oklahoma	2,766	1,528	1,238
Texas	12,487	9,693	2,794
Mountain:			
Montana	753	183	570
Idaho	831	140	691
Wyoming	390	----	390
Colorado	2 583	1,853	730
New Mexico	1,168	388	780
Arizona	2,270	1,697	573
Utah	1,228	968	260
Nevada	610	492	118
Pacific:			
Washington	3,612	2,582	1,030
Oregon	2,329	1,408	921
California	21,520	19,960	1,560
Alaska	382	168	214
Hawaii	887	718	169

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[1] Metropolitan status as of 1974. New England areas have been generalized to county boundaries.

Source: U.S. Bureau of the Census, "Current Population Reports:" "Federal-State Cooperative Program for Population Estimates and Population Estimates and Protections, Series P-26 and P-25."

State	Rural population Total	Nonfarm	Farm
Alabama	1, 431, 592	1, 271, 951	159, 641
Alaska	153, 853	152, 740	1, 113
Arizona	362, 819	339, 546	23, 273
Arkansas	960, 839	787, 162	173, 677
California	1, 819, 999	1, 635, 124	184, 875
Colorado	471, 177	385, 188	85, 989
Connecticut	688, 131	673, 183	14, 948
Delaware	152, 943	141, 583	11, 360
Florida	1, 322, 372	1, 250, 111	72, 261
Georgia	1, 822, 991	1, 651, 447	171, 544
Hawaii	130, 811	124, 878	5, 933
Idaho	325, 467	231, 759	93, 708
Illinois	1, 887, 548	1, 458, 822	428, 726
Indiana	1, 822, 659	1, 448, 069	374, 590
Iowa	1, 207, 551	695, 180	512, 371
Kansas	762, 344	524, 400	237, 944
Kentucky	1, 533, 261	1, 151, 565	381, 696
Louisiana	1, 232, 384	1, 118, 627	113, 757
Maine	487, 556	464, 716	22, 840
Maryland	917, 501	855, 116	62, 385
Massachusetts	878, 874	860, 043	18, 831
Michigan	2, 319, 906	2, 042, 377	277, 529
Minnesota	1, 278, 411	823, 895	454, 516
Mississippi	1, 229, 600	1, 019, 277	210, 323
Missouri	1, 399, 685	1, 040, 366	359, 319
Montana	322, 065	239, 936	82, 129
Nebraska	569, 435	331, 457	237, 978
Nevada	93, 517	85, 801	7, 716
New Hampshire	320, 990	311, 917	9, 073
New Jersey	794, 900	762, 468	32, 432
New Mexico	305, 295	267, 808	37, 487
New York	2, 632, 536	2, 441, 877	190, 659
North Carolina	2, 796, 538	2, 421, 846	374, 692
North Dakota	344, 199	191, 858	152, 261
Ohio	2, 628, 673	2, 257, 727	370, 946
Oklahoma	818, 211	642, 862	175, 349
Oregon	688, 874	586, 689	102, 185
Pennsylvania	3, 366, 527	3, 141, 289	225, 238
Rhode Island	123, 565	121, 206	2, 359
Scuth Carolina	1, 358, 623	1, 247, 095	111, 528
South Dakota	368, 877	206, 147	162, 730
Tennessee	1, 616, 980	1, 300, 163	316, 817
Texas	2, 266, 898	1, 880, 724	386, 174
Utah	205, 959	179, 662	26, 297
Vermont	301, 458	275, 031	26, 427
Virginia	1, 717, 340	1, 524, 556	192, 784
Washington	932, 672	820, 846	111, 826
West Virginia	1, 064, 712	1, 007, 267	57, 445
Wisconsin	1, 508, 280	1, 093, 074	415, 206
Wyoming	131, 539	100, 276	31, 263
Puerto Rico[1]	1, 136, 542	821, 505	315, 037

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[1] Nonfarm computed.

STATEMENT OF DR. KENNETH R. FARRELL, ACTING ADMINISTRATOR, ECONOMICS, STATISTICS, AND COOPERATIVES SERVICE, U.S. DEPARTMENT OF AGRICULTURE

Mr. Chairman and Members of the Committee, I am pleased to be here to discuss the rural development research conducted within USDA by the Economics, Statistics, and Cooperatives Service. ESCS research must be viewed in combination with the cooperative research program carried out in the Land Grant System—as already described by Assistant Secretary Cutler—in order to get a complete picture of USDA's role in rural development research. The joint nature of this research relationship has long been recognized by the Department, as evidenced by our active participation in the USDA-Land Grant Research Planning System. We also fund ESCS field staff in a number of Land Grant locations, where our work and that of the school's will be facilitated by a closer working relationship.

ESCS ORGANIZATION AND RESOURCES

Before turning to your questions, let me briefly describe ESCS; which was established officially on December 23, 1977. It is a consolidation of the Economic Research Service, Statistical Reporting Service, and Farmer Cooperative Service; designed to be a more effective organizational vehicle to assure adequate planning and coordination of statistical, economic research, and cooperative assistance functions in the Department. This should result in improved services for agriculture, rural people and communities, and the general public.

Our economics research activity, including that concerned with rural development, is contained in the Divisions which made up the old ERS. Total resources currently available to the Economics Divisions in FY 1978 are $32,561,000, of which 95 percent is appropriated funds. Our FY 1978 employment ceiling for the Economics Divisions is 870. Rural development research in ESCS is concentrated in the Economic Development Division. (Ken Deavers, who is Director of that Division is here and available to answer questions which you may have later.) That Division has an FY 1978 budget of $3 million, all but $162,000 of which is from appropriated funds. The FY 1978 employment ceiling for the Economic Development Division is 91. Attachments 1 and 2 to my statement shows the history of funding and staffing of the Economic Development Division for the past 5 years and major elements of our current research program in rural development.

I'd like to concentrate my remaining remarks on three issues which you raised in your letter to the Secretary inviting USDA participation in these hearings;

(1) Definition of rural development.
(2) New initiatives needed in rural development research.
(3) Availability and applicability of the research to rural people.

Definition of Rural Development

To the best of my knowledge, no one has come up with a definition of rural development which is entirely satisfactory to all of the people who research the subject, manage programs to achieve it, make policy to affect it, or legislate to bring it about. However, in the course of its rural development policy study late last fall, the Department did develop a description of rural development and three operational objectives that I believe are useful. That study suggested that rural development might best be described as a public commitment to maintain opportunities for individuals to choose among a wide range of lifestyles—urban as well as rural—and to assure that those choices are not so inordinately costly in terms of decent opportunities to live and work that they are available only to the very few.

To bring this kind of rural development about, programs and policies need to be implemented which meet three objectives.

Expand economic opportunity through improved access to better jobs and income for low-income and underemployed rural people, including small family farmers, and assist in adjustment to structural economic change that results (or is likely to result) in chronic unemployment.

Provide access to an acceptable level of essential public facilities and social services for all rural people.

Strengthen the planning, management, and decisionmaking capacity of public (and private) institutions concerned with economic opportunity and quality of life in rural America, and provide better access for all rural communities to Federal programs.

I believe the focus of the ESCS rural development research effort can be improved by attention to this view of rural development.

(2) *New initiatives for Rural Development Research*

The need for new rural development research knowledge is underscored by the fact that rural areas are growing twice as fast as metropolitan areas, and yet our understanding of the causes and likely future course of that rural growth is quite limited. Our Economic Development Division receives continuing requests from Federal rural development agencies to provide information beyond our current expertise on the conditions in rural America. Included are specific requests for projections of trends in rural areas—of population, income, and employment. Such projections are basic to planning strategies for provision of rural health care facilities, housing, water and sewer, and to those concerned with programs for job creation and training. At present, we have no analytical basis on which to make reliable estimates of such variables for nonmetro America. This represents a major gap in our rural development research capability. Clearly, such estimates should be based on sound analytical modeling of rural conditions.

Another example of knowledge we need from rural development research is in the area of information on nonfarm incomes (and family labor force participation) of small-farm operators. Small-farm families are an important source of labor supply for the economic activities in rural America. In addition, expanding nonfarm income opportunities have been an important factor in improving the well-being of these families and increasing the likelihood that they will remain involved in farming. While we know from existing data that small farm families as a class are not poor, because many earn substantial off-farm incomes, there continue to be a substantial number of small farm families in poverty. A major gap in our knowledge results from our inability to link existing people and agricultural data to obtain better information on this group. Thus, ESCS cannot now properly evaluate small farmers' economic position, realistically analyze their future potential, and assist in the design of effective programs to meet their needs. In my judgment, the main thrust of such research is likely to be rural development, with full recognition that expanded opportunities in farming are important for many rural people.

Another potentially important area of rural development research is the study of rural nutrition (including USDA programs) and relationships to health and employment in rural America. Over the past two decades substantial resources have been invested in Federal programs to relieve malnourishment among nutritionally vulnerable groups. However, more attention has been given to counting individuals served by programs than to measuring the extent to which the programs change nutritional practices, health status, work experience, and well-being. There would be value in exploratory studies of a multi-disciplinary nature which focus on the nutrition experience in highly nutritionally vulnerable groups in the rural population. The contributions of these groups to rural labor force productivity are important to the achievement of high levels of efficiency in our national economy, and to their achieving higher standards of living.

A different kind of knowledge gap is the inadequacy of the information we have on the quality and availability of essential community services in rural areas. Although Federal assistance to rural areas for community facilities amounts to billions of dollars annually, Federal resources are nonetheless limited and not adequate to meet all demands for assistance. Considerations of equity as well as effectiveness require that we target Federal assistance to communities most in need, and to do this, we must improve our knowledge of the conditions of services in rural communities. Again, it is also necessary to coordinate Federal, State and local resources to get the most productive use of these resources.

It is also important to note that agencies such as FmHA, which believes it has the best rural program delivery system, could use research which is targeted to program needs. We must provide research which helps all levels of government make more appropriate and consistent decisions on how to invest and manage rural development resources.

I would be remiss in saying this if I did not mention the fact that we have discussions underway at the staff level with repesentatives of the Farmers Home Administration, to assure that their interests are represented as priorities for rural development research are considered.

(3) *Availability and Applicability of the Research to Rural People*

Obviously, research is of no value if it is not communicated to people who can use it. The list of users is long, including other Federal agencies with rural development programs, State and local agencies, and individual rural citizens. In recent years, we have been making a special effort to perform analyses which can be used directly at the local level by people working in the rural development field, and to be sure those results get into their hands.

For example, for several years we have had a team of ESCS economists and Oklahoma State University extension workers and researchers cooperating on a study in western Oklahoma, trying to help local government decisionmakers improve the information they have for making decisions they think are important.

The first problem analyzed illustrates the way we identified topics to study and how we worked with local people. Shortly after the project began, the private firms providing ambulance service in Alfalfa County, Oklahoma, told the County Board that they intended to discontinue service in a few months. The County Board needed to figure out whether they could afford to provide ambulance service and how to do it. They asked for our assistance. The study team developed a fairly easy method of estimating demand for ambulance service, probable receipts, and costs with a variety of combinations of volunteer and paid service. The Board used these estimates to make their decisions. The study team packaged the techniques, complete with do-it-yourself forms, in a bulletin which since has seen wide use in the Great Plains. Similar studies have been completed for rural rental housing, fire services, and health services. Reports are being drafted on law enforcement and on rural clinics. In each case, the objective is to find techniques which rural people can use, themselves, to analyze their problems, and then put those techniques in a package which those rural people can understand and use. I understand that Dr. Gerald Doeksen, who formerly led this project, is on your hearing schedule. I'm sure he can provide more details.

An activity which ESCS has underway to make rural development research available to nontechnical users, is the development of an occasional publication called "Rural Development Perspectives." "Perspectives" is designed to bring results of rural research work to the quite sophisticated but nontechnical audience of people who are working on rural development policies and problems. Our goal is to have each issue carry several articles based on rural research, ours and others, with good analyses that they can use in designing and carrying through their programs. Each issue also will have a number of shorter articles which update previous reports, report on new findings or trends, or carry news of particular interest to the rural development community. We expect to publish the first issue of "Rural Development Perspectives" in August 1978.

An example of a slightly different kind of effort to get our information into the hands of the people who need it has occurred in the West. A team of ESCS economists, with Environmental Protection Agency funding assistance, has been analyzing the impacts of energy development in the Northern Great Plains States. They have concentrated on estimating impacts on population, employment and labor force in the affected areas and on State and local government revenues and finances when big new mines and power plants move in.

As fast as the team has developed estimates, they have been sharing these with the affected State governments, interacting with the governments and in many cases doing special analyses with their models to provide estimates of the impacts of particular potential developments.

These are only three examples, but they illustrate our commitment to seeing that our research is useful, usable and used.

ATTACHMENT 1

FUNDING AND STAFF, ECONOMIC DEVELOPMENT DIVISION, ESCS, FISCAL YEARS 1974-78

Fiscal year	Appropriated funds	Reimbursements and allotments	Total funds	Authorized staff at end of fiscal year [1]
1978	$2,838,500	$162,865	$3,001,365	91
1977	2,682,000	165,634	2,847,634	93
Transition quarter	632,000	54,670	686,670	(2)
1976	2,365,000	266,673	2,631,673	88
1975	2,389,000	142,558	2,531,558	92
1974	2,318,000	103,292	2,421,292	94

[1] Full-time permanent staff.

[2] No ceiling.

ATTACHMENT 2

PROJECTS IN ECONOMICS, STATISTICS AND COOPERATIVES SERVICE, FISCAL YEAR 1978

Program area and decision unit	Number projects	SY's	Total funds
I. Economic Development Division, ESCS	(16)	(59.9)	($2,314,000)
A. Rural housing	2	(5.7)	(219,000)
1. Status of rural housing		4.8	186,000
2. Analysis of alternative programs to improve rural housing		.9	33,000
B. State and local government	2	(8.6)	(231,000)
1. Providing resources to support government services in nonmetro area		2.9	112,000
2. Organizing nonmetro local government and delivering services to promote rural development		5.7	119,000
C. Regional analysis	2	(8.0)	(328,000)
1. Analysis of regional development and growth in the United States		5.4	216,000
2. Construction of indicators of well-being and development in the United States		2.6	112,000
D. Resource development	1	(4.8)	(228,000)
1. Economic, social, and cultural consequences of coal and oil shale development		4.8	228,000
E. Rural population	2	(5.0)	(269,000)
1. Trends in farm rural and nonmetro population		3.8	221,000
2. Internal migration and migration pressures		1.2	48,000
F. Rural manpower	2	(10.0)	(490,000)
1. Nonmetro labor force characteristics		5.7	322,000
2. Nonmetro labor market analysis		4.3	168,000
G. Income	2	(8.3)	(279,000)
1. Analysis of income position of target groups in nonmetro areas		5.7	175,000
2. Analysis of selected welfare measures in nonmetro areas		2.6	104,000
H. Health and education	2	(5.8)	(152,000)
1. Rural health studies		3.3	78,000
2. Rural education studies		2.5	74,000
I. Development decisions	1	(2.7)	(66,000)
1. Improving local rural development decisions		2.7	66,000
J. Development models	1	(1.0)	(52,000)
1. Models for rural growth, development and progress		1.0	52,000
II. Natural resources economics division, ESCS	(10)	(27.2)	(1,108,000)
A. Rural resources—environment	4	(14.9)	(819,000)
1. Economics of agricultural nonpaint pollution control and water quality		2.5	188,000
2. Economics of waste management and environmental quality in rural areas		4.4	208,000
3. Rural environmental benefit and cost evaluation		4.3	185,000
4. Economic analysis of the impact on environmental quality of coal and oil shale development		3.7	238,000
B. Rural resources	2	(10.8)	(425,000)
1. Competition for rural (land and water) resources		6.5	213,000
2. Land-use planning and policy		4.3	212,000
C. RC & D assistance	4	(1.5)	(64,000)
1. Strip mine reclamation			6,000
2. Black Hills part facility		.25	8,000
3. Economics of recycling		.25	8,000
4. Crow Wing canoe trail		.5	20,000

STATEMENT OF GEORGE RUCKER, RESEARCH DIRECTOR, RURAL AMERICA, INC.

Chairman Leahy and Members of the Subcommittee, my name is George Rucker and I am the Research Director of Rural America, Inc., a national membership organization seeking to improve human opportunity and to ensure equity for small town and rural people. We appreciate the invitation to appear on this panel and comment on the importance of rural development research. We are even more grateful that the hearings are taking place.

Whether it be public or private, an agency's research agenda tells a great deal about that agency and what one can expect from it. An in-depth oversight look at the rural development research agenda of the Department of Agriculture is as important as it is long overdue. Even if this Administration is as good as it manages to sound in terms of recognizing the needs in the field of rural development research, the fact that they know you and your colleagues are looking approvingly over their shoulder can't help but increase their joy in good works.

Let me begin by stating briefly our belief about the goals of a responsible federal rural development policy. We believe that it is a public responsibility to ensure that people's fundamental needs are met—including adequate shelter, jobs, food, and health care. An economic system that produces poverty has the responsibility of paying for the redress of that injustice. It is the federal government's responsibility to ensure equity in the distribution of services, the allocation of public resources, and the protection of basic rights. In our own organizational efforts to espouse those principles and to seek public accountability to them, Rural America has a long-standing and continuing interest in public policy research, as well as a painful awareness of the shortcomings that have been characteristic of federal efforts in the past, especially those of the Department of Agriculture.

Our past unhappiness is well set forth in a Working Paper that was prepared for last year's Rural America Conference. The title of the paper was "Issues in Agricultural Research" and I would like to submit a copy to the Subcommittee in lieu of covering the same ground. Some of the statistics could be updated now and one or two of the specific recommendations may be out of date, or "too late" if you prefer, but the general scene is not much changed. To put it in more harsh terms than our Working Paper, the research program of the federal agency charged with serving the needs of rural people has been of questionable adequacy in size, misguided and distorted in its priorities, and lacking in overall unity and coherence.

Admittedly, the question of adequacy is a relative judgement. USDA is the sixth largest federal agency in terms of research and development outlays ($516 million last year; $582 million next). But it accounts for less than 10% of all federal research and development outlays, even when you exclude the military, energy and space programs (and less than 3% if those are counted). More importantly, and not just a concern for balanced rhetoric. It needs to be clear that rural development research has a role to play in responding to that agenda item, and not just an assignment to put together reports that will fulfill the letter of congressional mandates.

With that kind of a real commitment, we might see a lot of changes.

1. For example, if it is made clear that the role is to develop a policy that is responsive to rural people's needs, we might try and get some people-input into the priority-setting process for USDA research. As it is, one would gather that the department thinks research "users" means only academicians, agribusiness technicians, and occasionally extension agent administrators. A more broad-based and democratic process of setting research priorities can not only make the research more relevant in subject matter, it would probably also result in making it more usable in form and dissemination.

2. We might get full funding of the Title V research authority instead of the proposed ending of that one small earmark that grew out of congressional desperation. Among other things, the specific linkage of Title V research with extension has maintained at least some pressure for dissemination and use. Experience under the set-aside has provided examples of how to use research funding to respond to local needs as well as to identify them.

3. We might get some significant improvements in the coverage and reliability of data on rural needs and federal responsiveness to them. The nature of the problem has been well stated by USDA's own testimony on the proposed Rural Development Policy Act:

"The Federal Government produces a wide variety of social and economic data. When one comes to monitoring the progress of rural development or planning and administering rural development programs, however, these data are surprisingly short of the mark. The data do not cover all the needed subjects. When they do, the definitions and concepts used are often inappropriate for rural areas, or the data cannot be disaggregated to portray the wide range of rural conditions." Finally, there are timing problems.

Rural America can concur in that assessment out of our own experience. In attempts to document the pattern of inequity in federal programs we have consistently sought data on all aspects of rural needs and have looked for comparable data on federal programs and their operational impacts. While USDA's Economic Research Service put together some of the most useful compilations for those purposes—the Committee Prints titled *The Economic and Social Characteristics of Nonmetropolitan America in the 1970's*—it is worth remembering a number of things about those documents: They were prepared in response to a congressional request, not on the initiative of the Department itself; they had to rely on sources which were not only uneven in coverage, but in some instances of questionable reliability; and nobody made much use of the data except for proponents of the Rural Development Act and advocacy groups like ours that continue to use them as best we can to illustrate the disproportionate needs and the inequitable response of the government to those needs.

We—and I'm sure others—continue to find it frustrating to try and analyze the distributive aspects of public policy. The problems with unemployment data for rural areas has long been recognized. It is a conceptual issue as well as one of reliability. Rural and small town data on very basic sorts of economic activity just don't exist. This is true of credit and finance institutions and their operational patterns, of retail trade, of manufacturing activities, and on down the line. Data on cost differentials represent another area where there is increasing recognition that we don't know enough. This runs to costs of program delivery as well as costs of living. Data are lacking on differences in quality of goods and services and in range of choices available.

One of the most frustrating aspects is that government agencies frequently don't know—and that means they don't care—about the urban/rural or metro/nonmetro distributional patterns of their program activities. Or, if they have the data, it is available only thru computer runs which most of us are in no position to carry out, even if we can get access to the tapes. If agencies won't collect and publish such data regularly, it would be nice if they'd at least do a special analysis once in a while and let us all in on the results.

What we might hope for if there is a real commitment to rural development research is that USDA will begin to push persistently to see that other agencies making surveys and in-depth analyses of program needs include a look at the special situation of rural areas and small towns; that it will begin to insist that all agencies with program responsibilities in rural areas collect their program statistics in such a way as to allow analysis of how they are meeting those responsibilities; and that it will call for a major initiative on OMB's part to upgrade the quality of the federal outlays data—currently the single most useful source of information about the broad range of federal programs, but still too frequently nothing but a guess about their real impact.

4. We might get implementation of the 1977 Housing Act mandate that Farmers Home Administration establish its own in-house research capacity. We should at least be able to expect better coordination of the research that USDA already finances. To illustrate the need, two examples from the field of rural housing: Several years ago the Forest Products Lab in Wisconsin developed some designs for low-cost houses. They were initially available at no charge to Farmers Home Administration borrowers. Then, adoption of essentially HUD-dictated Minimum Property Standards by FmHA made those designs ineligible foor continued FmHA financing. The designs themselves continue to be reproduced by private publishers in 'build-your-own-house' books, but there has never been any action by USDA to modify those basic designs so that they could meet the new MPS and continue to be useful to the government's major low-income housing finance mechanism in rural areas.

A similar and more recent example is that of the USDA-financed Rural Housing Research Unit at Clemson. It has been working on low-cost materials and innovative designs, with special attention to solar heating utilization. But the Clemson research folks and the FmHA program folks don't seem to have been talking to each other. So the design proposals include some cost-cutting techniques that probably aren't really practical for field application, and once again the agency with primary responsibility for low-cost rural housing is not making use of research paid for by its own department. In both of these examples, a continuing coordination and dialogue between the research workers and the program administrators could have resulted in more realistic results from the research and more flexibility and receptivity to innovative approaches in the rural housing program. It is especially galling to find these two arms of USDA working at what seem to be cross-purposes since Assistant Secretary Mercure has directed FmHA to see that alternative energy sources become a significant element in housing the agency finances. A joint effort between the Clemson group and FmHA could produce quick results in terms of plans for low-cost, proven-cost-effective solar systems which builders of rural housing would know were acceptable to FmHA. This would hasten the time when solar becomes an available option to low-income people who can't afford the present high expense associated with the design, testing, and obtaining of FmHA approval for a particular system.

5. Finally, a real commitment to rural development research might even find USDA doing some evaluations of other agencies' programs to see how well they are serving the needs of rural people. This kind of cross-agency watchdogging has been specifically authorized on behalf of low-income people in the Communi-

ty Services Administration's legislation. It seems to me that it is a function equally appropriate to the Section 603 mandate which the Rural Development Act lays on the Department of Agriculture. If the Department shrinks from doing the job itself, perhaps it could fund some rural counterparts to the think-tanks like the RAND Corp. and The Urban Institute that serve the agencies whose constituency is metropolitan America.

It is pretty clear from testimony here and elsewhere that the present leadership at the Department of Agriculture is aware of the directions that need to be taken. But for that awareness to be reflected in meaningful change—at USDA and at other federal agencies—there will have to be more than awareness. At a minimum there will have to be evidence that the Carter Administration considers rural policy as important as urban policy. We have yet to see that evidence, but perhaps with the continuing prodding of the legislative branch—which has been ahead of the executive on this issue for years now—we need not give up hope. Thanks again for the chance to add our bit to the prodding.

"STRATEGIES FOR RURAL ACTION"—THIRD NATIONAL CONFERENCE ON RURAL AMERICA, DECEMBER 5–7, 1977, WASHINGTON, D.C.

ISSUES ON AGRICULTURAL RESEARCH—A WORKING PAPER PUBLISHED BY RURAL AMERICA

USDA in Perspective

The United States Department of Agriculture has been the only major department of Government consistently charged with an ongoing responsibility for researching the problem areas which impact rural Americans. Created in 1862 as "the people's agency," today's USDA mission is defined as "one which serves rural peoples * * * helping to curb and cure poverty, hunger and nutrition."[1]

The administration and conduct of programs and research which impact all rural people is indeed a broad charge. Sixty-five million rural Americans comprise 32.0% of the total 1970 population.[2] Yet, in 1976, the entire Department of Agriculture commanded just 3.5% of the total federal budget. Only 4% of the 12.7 billion dollars appropriated to USDA actually was allocated to the department's six primary agencies of research.[3] USDA research, especially that which focuses upon food, fiber and agricultural production, is highly visable in national planning and policy circles. However, it must be emphasized that this department has primary responsibility for program implementation and, thus, public service delivery. It ranks only tenth among major departments and agencies of government in terms of proportion of its budget allocated to research.[4]

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[1] This mission statement is abbreviated from *The United States Government Manual*, 1977–78, published by the Office of the Federal Register and distributed by the U.S. Government Printing Office, p. 109.

[2] Among many definitions of non-metropolitan population now utilized in Washington, five are most often found. Table 1, immediately below, illustrates that the variation in definition of rural centers on the size of the place and its SMSA-non-SMSA location. We have used the most liberal definition in the text here. (Data on Table 1 are drawn from Jonathan Sher's review of the definitional implications in census materials as presented in *Education in Rural America*, (edited by Sher and published by Westview Press, Boulder, Colorado (1977), pp. 377–78.)

TABLE 1.—COMMON DEFINITIONS OF RURAL

Common labels	1970 definition	Population (millions)	Total (percent)
Rural nonmetro	All farms, open countryside plus places less than 2,500 outside SMSA's.	37.5	18.5
Expanded rural	All farms, open countryside plus places under 10,000 outside SMSA's.	49.4	24.9
Census rural [1]	All farms, open countryside plus places under 2,500 in and outside SMSA's.	53.9	26.5
Nonmetropolitan	All farms, open countryside plus places under 50,000 outside SMSA's.	63.8	31.4
Combination rural	"Census rural" plus all nonmetro, places between 2,500–10,000.	65.1	32.0
Total		203.2	100.0

[1] Census rural is the most common definition.

[3] The 4% research outlay figure is calculated from data presented on Table 3. Utilizing 1976 actual appropriation figures, the total research budget of $508,488 thousand is divided

(Continued on next page)

Research at USDA is conducted in a vast and extremely complex system. It involves administrative liaison with more than 500 locations in all 50 states[5] with "many independent decision makers."[6] Thus, coordination of multiple departmental roles is inherently difficult. The introduction of new initiatives is equally taxing. In spite of its creation as "the people's agency", preferential treatment for certain sectors of rural America has clearly emerged.

(Footnote 3—Continued)

by the total USDA 1976 budget outlay. Throughout appropriation hearings (and in the budget statements) it is stressed that USDA research functions are limited to the six agencies listed on Table 2.

TABLE 2.—APPROPRIATIONS FOR USDA RESEARCH AGENCIES, 1976

USDA research agencies	1976 dollars (in thousands)	Total 1976 research budget (percent)
1. Agricultural Research Service[1]	282, 839	55. 6
2. Cooperator State Research Service	114, 460	22. 5
3. Forest Service	82, 280	16. 2
4. Economic Research Service	25, 782	5. 1
5. Statistical Reporting Service[2]	1, 873	. 4
6. Farmer Cooperative Service	1, 254	. 2
Total research[1]	508, 488	100. 0
USDA total budget outlay[3]	12, 796, 000	
Total Federal budget outlay[3]	366, 466, 000	

[1] Excludes $7,500,000 for special foreign currency program.

[2] In preparing this budget statement for House review, it seems that USDA officials feel that the crop and livestock estimation activities of SRS do not constitute research, but rather, are a "service."

[3] These total outlay figures are from "The Budget of the U.S. Government fiscal year 1978"; summary tables, table 4, "Outlays by agency," p. 375.

Source: "Hearing Before a Subcommittee of the Committee on Appropriations," House of Representatives, 95th Congress, 1st Session, "Agriculture and Related Agencies Appropriations for 1978, Part 1," table 11, "Appropriations for Research and Education, fiscal years 1969 to 1977," p. 201.

[4] Comparative data for research allocations appears on Table 3. These data represent outlays while the data on Table 2 represent appropriations. The figures on the two tables are not comparative in a precise sense because of this difference.

TABLE 3.—COMPARATIVE RESEARCH BUDGET OUTLAYS FOR MAJOR DEPARTMENTS AND AGENCIES, 1976

[Dollar amounts in millions]

Department or agency	Actual budget total	Research outlay	Proportion of budget for research (percent)
1. NASA	$3, 669	$3, 521	95. 9
2. NSF	731	623	85. 2
3. ERDA	3, 759	2, 225	59. 2
4. NRC	179	81	45. 3
5. Smithsonian	112	28	25. 0
6. Interior Department	2, 293	315	13. 7
7. Commerce Department	2, 020	224	11. 0
8. Defense Department (military only)	88, 036	9, 329	10. 6
9. EPA	3, 117	251	8. 0
10. Agriculture Department	12, 796	460	3. 6
11. Transportation Department	11, 936	303	2. 5
12. AID	1, 001	23	2. 3
13. Justice Department	2, 241	48	2. 1
14. TVA	980	19	2. 0
15. HEW Department	128, 784	2, 566	1. 9
16. HUD Department	7, 079	54	. 8
17. VA	18, 414	97	. 5
18. Labor Department	25, 727	24	. 1

Source: "Special Analyses Budget of the U.S. Government, Fiscal Year 1978," p. 296.

[5] *Fact Book of United States Agriculture*, Miscellaneous Publication No. 1063, USDA, revised March, 1976. U.S. Government Printing Office, p. 41.

[6] *Agricultural Research—Its Organization and Management*, a Study by the Staff of the U.S. General Accounting Office. April 9, 1976: p. 1.

Traditional Agricultural Research and Response to Changing Rural Needs

Although USDA has had a consistent mandate to serve all rural Americans, their research focus and, correspondingly, program emphases have been neither systematic nor consistent. In fact, traditional research emphases have been upon farmers, farming and farms, with disproportionately heavy focus upon the latter. Today farmers and their families constitute just 3.6% of the nation's population;[7] just over one-tenth of the rural population. The remaining non-farming rural Americans—over 1 in 4 Americans—represent a wealth of ethnic diversity and a broad array of socio-economic activity.[8] Thorough information from any national level data source describing the basic life quality conditions, and correspondingly, a systematic treatment of the needs of these rural peoples is simply not available on a qualitative or a quantitative basis.[9] However, "broad brush" overview data presented by one understaffed research agency at USDA, dramatically suggest that many areas of rural America are in dire need of a Federal agency advocate.[10]

Decades of USDA research have succeeded in providing technical assistance and public visability to basic problems of agricultural production. However, the fact is that the very structure of rural society has changed dramatically in the last five decades. Correspondingly, the needs of the Department of Agricul-

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[7] These data are represented on Table 4. We have emphasized farm family totals here. Another indication of the relative involvement of rural peoples in agriculture are the figures reflecting farm employment. In 1977, USDA reported that some 4.2% of the total American labor force was involved with farm labor. This was composed of 2.9% from farm family workers and 1.3% hired workers. See USDA's *1977 Handbook of Agricultural Charts*, Agricultural Handbook No. 524, November, 1977, p. 32.

TABLE 4.—U.S. TOTAL AND FARM POPULATION, 1900 TO 1977

	1900	1920	1940	1960	1970	1977[1]
Total population (thousands)	75, 995	105, 711	131, 669	179, 323	203, 235	215, 915
Farm population (thousands)	29, 875	31, 974	30, 547	15, 635	9, 712	7, 800
Farm share of population (percent).	39. 3	30. 2	23. 2	8. 7	4. 8	3, 6

[1] 1977 data represent preliminary estimates.

Sources: Figures from 1960 to 1977 are from USDA's "1977 Handbook of Agricultural Charts," Agricultural Handbook No. 524 (November 1977), p. 31. Materials from 1900 to 1960 are from USDA's "A Century of Agriculture in Charts and Tables," Agricultural Handbook No. 318 (July 1966), p. 42.

[8] Some suggest that while the cities may represent America's melting pot, rural areas mirror the Nation's true ethnic and cultural heritage as reflected in the rich diversity of relatively isolated ethnic enclaves. Regardless of the validity of these claims, the breath of activity in rural areas is a reality. The labor force, for example, runs the gamut from miners represented in the powerful United Mine Workers to woodcutters who labor under situations which approximate feudalism. Although national level data show that the vast majority of rural Americans are white, data aggregated in such a manner does not reflect the ethnic group clustering that occurs in rural areas. Swedish, German, Italian, French Canadian, Russian, among others, all represent peoples with significantly strong traditions in rural America. Somewhat better known, of course, are the strong rural traditions of southern blacks, chicanos, and a great variety of native American peoples. For an agency which purports to serve rural peoples, the current lack of systematic information about rural peoples contributes to a state of affairs where programs are ill designed to respond to local and regional differences.

[9] Support for this statement is obtained from the common laments of many rural researchers. Hard documentation of the claim is provided in *Senate Hearings before the Committee on Appropriations, Agricultural and Related Agencies*, FY '78, Part 2. (February 22, 1977). See especially the section dealing with the Rural Development Service (pp. 20, 21, 32-4, and 38). For example, Rural Development Coordination Officer John Evans states on page 20, "One of the problems we have experienced in trying to come up with meaningful rural data for reports required by Congress and needed by management is the lack of good hard data on the needs in rural areas." Also see Deavers and Nagle's statement introduced at this 3rd Annual Rural America Conference entitled, *Rural Development Issues*.

[10] That under-staffed research agency is, of course, the Economic Development Division of the Economic Research Service. As Table 2 above depicts, ERS commanded just 5% of the USDA research outlays in 1976. Although EDD is heavily dependent upon the Bureau of the Census and other external research bodies, it must be recognized that this tiny research group has produced most of the data that we do have on conditions in rural America. See for example, the *Annual Presidential Messages on Rural Development* or a series of information pieces on *Social and Economic Characteristics in Metro and Non-metro Counties*. For a short period, it was decided to strengthen the rural research role and the EDD was made a part of the Rural Development Service. However, the research division was subsequently moved back to ERS. "With the removal of the EDD, the remaining staff could not undertake economic, statistical programs related to the quality of life in rural America." (1978, *Senate Appropriation Hearings*, Agriculture, Part 3, p. 11). All of this jockeying about of research functions indicates the absence of an overall rural development strategy which would insist upon having a consistent and systematic research effort.

ture's traditional rural constituency have changed as well. Between 1920 and 1977, the number of farms declined from just over six and a half million to two and three-quarters million—A DECLINE OF 42%.[11] The rural non-farm population has increased proportionately from 18% to 28% of the nations' population.[12]

Obviously, a very basic change in the nature of the traditional farm constituency for USDA programs has occurred in just under six decades. This change in the character of the rural population closely parallels fundamental changes in the economic and social structure of American agriculture. In the process, the relationship between USDA research and rural social realities has moved far from any consistent pursuit of a Jeffersonian agenda. An ever more centralized, corporate controlled and petro-chemical dependent form of agriculture now characterizes rural economic structure. In human terms, we note that this change is dramatically represented in the fact that, by 1970, only 5.5% of the farmers owned or leased over half of all productive farm land.[13] More than 50% of all farm operators had off-farm employment in the early 1970's; almost twice the proportion of off-farm employment found in the 1920's.[14] In this transition, the research focus for USDA has not shifted to the well-being of the rural

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[11] The actual number of farms in the United States is currently a topic of some debate. Definitional variation focuses upon the scale of farm production. Recent findings indicate that the small farm (one with less than $1,000 in annual sales) has been terribly underrepresented in USDA farm accounting.) See Rodefield, Testimony before the Senate Subcommittee on Administrative Practice and Procedure of the Judiciary Committee, October 19, 1977). Even with these serious probelms of undernumeration, farms with less than $1,000 in sales are estimated as constituting 20% of all farms in the United States. The figures presented on Table 5 below represent published USDA data on farm size selected from USDA's *1977 Handbook of Agricultural Charts*, op. cit., p. 21 and USDA's *A Century of Agriculture*, op. ct., p. 41.

TABLE 5.—U.S. TOTAL FARMS, LAND IN FARMS AND AVERAGE SIZE, 1900-77

	1900	1920	1940	1960	1970	1977 [1]
Number of farms (thousands) [2]	5, 737	6, 518	6, 350	3, 956	2, 954	2, 752
Land in farms (acres in millions) [3]	839	956	1, 061	1, 178	1, 103	1, 083
Average farm size (acres)	146	147	167	298	373	391

[1] Based on preliminary estimates.
[2] The high point for number of farms was in 1935 when 6,814,000 farms were estimated to exist.
[3] The high point in total acreage was in 1954 with an estimated 1,206,355,000 acres was reported.

[12] These data are based upon the figures presented in Tables 1 and 4 here and were calculated simply by subtracting the farm and farm family population from the total rural population.

[13] "Data on the concentration of farm operating units are more abundant than data on ownership. . . . In 1935, nearly 50% of farmers operated farms that were under 70 acres in size, accounting for about 9% of total farm land. But 30% of the land was held by only 88,000 farmers (1.3%), who operated farms of more than 1,000 acres. By 1969, the number of farmers had declined 4.1 million and average farm size had increased from 155 acres to 389 acres. In that year, some 151,000 farmers (5.5% of all operators) operated more than 1,000 acres and accounted for over half (54.4%) of all land in farms." from *Our Land and Water Resources: Current and Prospective Supplies and Uses.* Miscellaneous Publication No. 1290, ERS, USDA, May 1974, p. 23.

[14] These generalizations are based upon the data depicted in Table 6:

TABLE 6.—OFF FARM EMPLOYMENT, SELECTED YEARS 1929 TO 1969

[In thousands]

	1929		1939		1949		1959		1969	
	Number (thousand)	Percent	Number (thousand)	Percent	Number (thousand)	Percent	Number (thousand)	Percent	Number (thousand)	Percent
Number of farms	6, 295	....	6, 102	....	5, 388	....	3, 710	....	2, 730	....
Farm operators working off farm	1, 903	30. 3	1, 749	....	2, 093	38. 9	1, 664	44. 9	1, 412	54. 2
Farm operators working over 100 days off.	723	11. 5	945	15. 5	1, 257	23. 3	1, 108	29. 9	1, 091	39. 9

Source: Appropriate years of the U.S. Census of Agriculture. Table is abstracted from the working draft materials of Dr. Ada Cavazzani, Department of Rural Sociology, Cornell University, Ithaca, N.Y.

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citizen, but rather has continued to place primary emphasis upon the nature of the agricultural product and its accompanying market structure.

In 1974, the United States General Accounting Service illustrated the present research orientation of USDA by amassing total allocations of USDA, land grant college and agricultural experiment station scientific man-years (SMYs). Only 404.6 SMYs were allocated directly to research level of living and community quality in rural America, just 3.8% of the total SMY commitment. By comparison, some 771.3 SMYs were assigned to improvement of biological efficiency of field crops, 569 SMYs were committed to noncommodity-oriented technology and biometry, and a total of 528.7 SMYs were working on improving efficiency in the marketing system. These data translate to just one research SMY for every 161,000 rural Americans devoted to rural community and life quality issues, compared to one food and fiber research SMY for every 6,400 rural Americans.[15]

While contemporary USDA priorities were occupied with developing an emphasis upon food, fiber and market research, a most dismal quality of life profile in rural communities has emerged. In the early 1970's, for example, 46% of the nation's poor were located in the non-metropolitan areas; median family income of rural people was 27% less than that of urban families.[16] Almost sixty percent of the nation's substandard housing was located in rural areas.[17] Rural education attainment lagged far behind that of urban adults.[18] And so on through a depressing set of dismal statistical profiles. In short, the basic research functions—documenting constituent need, establishing policy priority, providing technical assistance for both program design and for program implementation and assessing program impact—were, at best, conducted as a marginal, low priority activity.

Research Activities and Their Appropriate Role

Now it is patently absurd to suggest that USDA research priorities have CREATED the inequality now found to exist when contrasting rural and urban life quality in America. However, one critical allegation lies in the observation that research has failed to serve its supportive role at the people's agency. It has failed to provide the agency with ammunition to adequately serve as an accountant of human conditions, as an advocate for the full spectrum of rural needs, in the design of program response and in the conduct of objective program impact evaluation. In short, Departmental research has served to augment the change to corporate centered agri-business—in and of itself, a phenomena with questionable benefit to rural peoples—without influencing traditional departmental priorities. As seriously, the research effort has never served as an advocate for the changing and expanding rural constituency.

One would hope that agricultural policy in the 1920's did not intend to be even remotely associated with the current low standards of rural life. However, *had* USDA followed a research agenda designed for thorough program accountability, the nation would have been aware of conditions in rural America long before research "events" such as Michael Harrington's *The Other America*, Harry Caudill's *Night Comes to The Cumberland*, and the CBS documentary, *Harvest of Shame*, (all external to the Department's research activities) dramatically called attention to a rural crisis.

One recent "event" further illustrates the lack of research impacting far-sighted program accountability and advocacy. This "event" does reflect an improved social accounting system at USDA in recent years, albeit one of a descriptive, *ex post facto* (rather than an anticipatory) capacity. Surprise was expressed by USAA demographers when a reversal of the century long trend of rural to urban migration was discovered. Billed by some as a "Rural Renaissance",[19] this phenomena was totally unanticipated. Now, it is generally assumed that an increase in rural population promotes a host of "positive" ramifications for American Society: it will reduce pressure on the urban core, lead to better "balanced national growth", create a skill and talent pool necessary for sustained rural development, and so on. However, the "Rural Renaissance" is not attributable to any identifiable program or policy directive from USDA (or from any other federal agency for that matter). Regrettably, no proposed plans now exist to promote and sustain this growth phenomena. Nor has any contingency proposal dealt with the increased impact upon the public service sector likely to be generated by an increase in rural population. The general point here is clear: research at USDA has shed little light upon our ability to positively impact the entire rural sector of this society with general policy or resulting specific program support.

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[15] All calculations utilizing SMY data are derived from Appendix III of the GAO report, *Agricultural Research—Its Organization and Management*, *op. cit.*: pp 54–58. Goal and research problem areas VIII and IX were summed for fiscal year 1974 and divided by totals for all organizations.

[16] The 27% figure was calculated as follows: 1970 median family income for metropolitan counties is reported at $10,402. Median family income for all non-metropolitan counties was reported as $7,615. We simply divided $7,615 by 10,406 to arrive at the relative proportion reported in the text. Data are drawn from Hines, Brown and Zimmer, *Social and Economic Characteristics of the Population in Metro and Non-metro Counties, 1970*, ERS, USDA, Agricultural Economic Report No. 272: Appendix Table 16, p. 90.

[17] Explanation for the calculation of this figure is reported in *Low Income Housing Bulletin*, Rural Housing Alliance Publication 71-9, 1346 Connecticut Ave., N.W., Washington, D.C., September 1971, pp. 1 and 2.

[18] In 1970, there were 500,000 rural adults who had no schooling whatsoever. Overall, the educational attainment for rural adults lags significantly behind that of urban adults. (*U.S. Bureau of the Census, General Social and Economic Statistics*, Census of the Population, 1970: PC(1)-C1, Washington, D.C., U.S.G.P.O., 1972: Table 88, p. 386.

Obstacles in Establishing, Extending and/or Amending Research Priorities

Under the new administration, the President's rural roots and Secretary Bergland's farm background led many rural advocates to hope that concerns for the life quality of all rural Americans would make their way into the USDA agenda. However, current reorganization emphasizing rural needs and development priorities can only succeed if the entire rural constituency is identified and then integrated into the ongoing research agenda.

Rural development research must represent an ongoing, *normal* activity. At present, the Rural Development Service at USDA has no research function or budget of its own.[20] Like the Rural Development Service, traditional Extension Service activities have not included autonomous research operations. Although, structural changes promoted by reorganization are yet to be felt. The melding of the Rural Development Service with the Farmers' Home Administration *and* the realignment of traditional research agencies both suggest a blurring of the potential in-house advocacy role for rural development and, correspondingly, the research activities which accompany such program emphases.

As indicated above, research priority setting at USDA is a most complex process. Whatever the actual intentions of Departmental leaders, the prevailing research structure is dominated by many participants who lie beyond the direct control of the Department. Liaison activities through the land grant colleges and experiment stations create a bewildering array of research funding arrangements. (Within the land grant college configuration alone, dominance by those institutions enjoying an "economy of scale" in their research operation has led to charges of both a segmentation and overspecialization in many traditional areas of agricultural food and fiber research.) State and private agri-business funding sources determine allocation of much research energy.[21] As critically, select advisory committees serve to establish research priorities, and are composed largely of representatives of the land grants, agri-business and agri-industry.[22] If research priorities are to be extended or modestly realigned, both the advisory committee system and the nature of liaison with the land grants must be thoroughly evaluated.

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[19] The term "Rural Renaissance" was popularized through the Population Reference Bureau's pamphlet, "Rural Renaissance in America?" by Peter Morrison and Judith Wheeler (Vol. 31, No. 3, October 1976, Washington, D.C.). However, the base line documentation of the population growth in rural America is presented in a series of papers by Calvin L. Beale, a geographer-demographer with the EDD of ERS at USDA. See Beale, "The Revival of Population Growth in Non-metropolitan America", EDD, ERS, USDA, ERS-605, June 1975. For subsequent analyses and assessment of population change in the small community, see Beale and Fugitt, "Population Change in Nonmetropolitan Cities and Towns", EDD, ERS, ESDA, Agricultural Economics Report No. 323, February 1976.

[20] See comments on footnote 10 above. Also see support for this statement as offered at the *Senate Hearings before the Committee on Appropriations*: Agriculture and Related Agencies Appropriations, FY '78, Part 2, pp. 3, 4 and 11.

[21] *The U.S. General Accounting Office Report on Agricultural Research*, op. cit.; p. 6., presents data on the total research dollars expended in FY 74 by source. These data show that just over 50% of the total research budget comes from USDA. Other inputs include the other federal agencies, 5.5%, state governments, 33.9%, industry and other sources, 9.1%.

[22] For a critique of the advisory committee system see *Hard Tomatoes, Hard Times* by Jim Hightower, pp. 69-74. A more recent overview is presented in the GAO report entitled *Agricultural Research—Its Organization and Management*, op. cit., pp. 8-9. Current rumors indicate that Secretary Bergland has dramatically decreased the number of research advisory groups. However, the reduction of these committees without a structural reorganization of their composition emphasizing rural needs will do little to impact the priority setting mechanisms.

Yet another factor influencing the setting of new or different research priorities is the lack of political unity and sustained attention characterizing the diverse ethnic and occupational clusters who constitute rural America. In the resulting vacuum, Congressional representatives, including those from rural states, find it more convenient to respond to the national agri-business interests who are well organized, easily accessible, and can skillfully make the arguments which are part and parcel of the traditional focus upon agricultural structure. Those few representatives of diverse rural interests find it difficult to marshal the resources and obtain access to decisionmakers. For example, in the spring of 1977, Senate Appropriation Hearings, just one group of the thirty-three who testified, spoke out clearly for increased rural development and human service interests.[23] More typically, rural development and rural services are mentioned as almost an afterthought, far down the list of priorities.[24] Clearly, greater effort must be extended to represent the interests of the majority of rural people in priority setting sessions. Potentially, the Extension Service represents a network already in place which, with elaborations, might serve to provide the agency a link with under researched and under served rural people. In this process, the Extension Service might be called on to share insight into the underresearched areas of need as well as to strengthen the role of this service in feeding research findings back to rural decision makers and programs.[25]

One final obstacle to priority development lies in the contrast between research focusing upon the relatively stable biological analytical units and the ever changing dynamics of social, economic and community conditions. An effective rural development thrust must be based upon the development of new materials concerning the structure of rural interaction. The prevailing structure of agriculture has promoted a dependency of rural peoples upon national and international markets. Careful research on the nature of contemporary rural life will undoubtedly illustrate a sharp contrast between those who are economically exploited by the existing rural economy and those who demonstrate relatively greater autonomy and self-sufficiency. One would suspect that the latter type of rural Americans are highly alienated from the national society. Top priority must be placed upon program design which promotes structures of interaction fostering social well being while simultaneously maintaining local autonomy.

In any new emphasis upon rural development, great care must be exercised in the design of a research agenda to avoid complicity in the promulgation of economic and social structures antithetical to local participation and control. Development of the rural sector must avoid the form of human degradation, loss of individual autonomy and pride represented by the programs of America's urban welfare syndrome. This type of developmental focus upon human needs and social structure represents a challenge to the existing research mentality of many policymakers, USDA officials and the researchers themselves. For example, one member of the House Appropriations Committee, frustrated by the ambiguities of social science research, exclaimed, "I think we had better forget rural development research and move ahead on the things we know how to do." [26]

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[23] *Hearings before a Subcommittee of the Committee on Appropriations*, U.S. Senate, 95th Congress, First Session, Agriculture and Related Agencies Appropriations for FY '78, Part 3, 1977. Especially see Appendix ff, p. 1901, page iii, which lists all Nondepartmental Organizations who testified.

[24] While priority lists vary depending on the source, it is typical for rural development and community resource needs to fall at the very bottom of USDA priority inventories. One clear indication of priorities is provided in the 1974 GAO report cited above (pp. 57–60) where regional planning committees ranked research priorities for the planning period from 1973 to 1978. Twenty-five research priorities were ranked; rural development was not on the list. Of the 25 issues, the only human service item, "improve quality of life in rural areas," was ranked in a tie for 18th in the final priority lineup.

[25] Organizational entities created in recent years which could serve this function include the Area or Community Resource Development teams. Designed to provide service to local governments and other rural organizations, field staff in this program are in an excellent position to provide feedback on both research needs of rural people and on the success of the application of research findings.

[26] This statement was recorded at a session of the U.S. House of Representatives, Committee on Appropriations, Agriculture—Environmental Appropriations for 1972, 92nd Congress, First Session, Part 2, p. 564. It is illustrative of prevailing attitudes because it was made by a most powerful Appropriations Subcommittee Chairman, Representative Jamie Whitten. Green, et. al. point out in *Who Runs Congress?* (Bantam Books, New York, 1972, p. 80) that Whitten has probably exercised more intimate control over USDA than any subcommittee chairman in history. They continue, "Whitten's record does consistently show an insensitivity to the human casualties of technological change in rural America."

The prevailing attitude suggests that changes in human conditions represents something only divine intervention can provide. Such an orientation may well prove to be the major obstacle to establishing, extending or amending agricultural research priorities.

Conclusions and Recommendations

Regardless of actual Departmental intent, the fact remains that USDA has been the only major agency of government charged with a serious and ongoing responsibility for the social and economic well being of almost one-third of this nation's population. In a society which can afford to send rural Americans orbiting in outer space, it is not unreasonable to insist upon increased research outlays to document the needs of rural Americans. Be that as it may, existing USDA research has been far from adequate in documenting existing need in rural areas and, thus, has failed miserably in serving as an advocate for rural peoples. Changes in the economic structure of rural society have been accompanied by change in the very nature of rural life. Again, USDA research has not served to dramatize the changing nature of rural society, nor has it provided technical support to program needs of all rural people.

Rural development and extension activity have both been offered as departmental activity areas which will respond to rural needs. Both have suffered from traditional agency biases toward large scale agriculture, and, as seriously, neither is currently designed to include self-contained research operations. Rural Development activities have struggled in the last few years to establish a respectable foothold at USDA. Most recently, reorganizational activity appears only to serve to further Rural Development's lack of visability.

Serious, long term, social science research has never enjoyed the stability entertained by the diversified and entrenched food, fiber and production research activities at USDA. Many existing obstacles threaten to deter any realignment or expansion of research priorities which include the broad gamut of rural needs.

The following recommendations range from the general to the specific. Some optimistically reflect assumptions that they may be immediately implemented. Other recommendations are, quite frankly, offered most pessimistically because they have been drafted many times before to no avail.

RECOMMENDATIONS

The Role of Planning and Policy

1. Immediate action should be undertaken by this administration to promote and coordinate national planning for rural development. To date, no public statement of such a planning policy has been forthcoming from the Executive's Reorganization Study of Local and Community Development Programs or a joint OMB-USDA study of federal rural policy alternatives, both designed to perform this task. A working statement of national rural development policy is essential as it will serve to focus the myriad of contemporary issues. It is equally essential to the establishment of research priorities. The design of such a statement must include representation of the entire gamut of rural interests through a routinized procedure which assures that their voices are heard. This rural development policy should be a major topic of discussion in the upcoming White House Conference on Balanced National Growth. Conferees at this Conference should be prepared to react to and critique a policy position constructed and circulated prior to the Conference, as opposed to the current format which will make this just one more working conference of multi-tangent discussion.

2. In coordination with formulation of rural development policy, efforts to improve the flow of technical assistance to rural people, organizations and governmental units must be pursued. This includes increased allocation and design for technical assistance activities at the Extension Service, Rural Development Service (RDS) through Section 111, and those external to USDA including CSA, ACTION and HEW. Each of these activities involve base line research activity, a fundamental component of technical assistance which provides the description of local conditions essential for local decisionmaking.

3. In order to further coordination of policy intent with positive impact upon rural people, existing structures which have potential to provide feedback to federal agencies must be augmented and supplemented. If programs are designed

with the primacy of local and regional conditions kept firmly in view, this feedback function is mandatory. One critical contribution of such feedback is the designation of research priorities. The mechanisms for field determination of research needs should be strengthened. Existing programs with such a capacity include the Community Resource Development activity of the Extension Service created under Title V of the 1972 Rural Development Act.

Activities at USDA

1. The activities at the people's agency must be conducted with greater correspondence to the needs of the entire rural sector. One means to this end is the more thorough integration of research responsibilities with Departmental missions. Such an activity includes the following research scenario:

a. Identification and description of all characteristics of rural society.

b. Identification of top priority areas as dictated by human need.

c. Continued development of program supportive technology (which includes the design of alternative program and organizational strategies).

d. Follow through research on the *impact* and success of varying program strategies.

e. Research evaluation of program (and accompanying technological support) impact by utilizing measurement of rural conditions (step 1.) before and after program implementation.

2. A case must be made for greater appropriations for rural development research on the basis of the argument that research is not *only* a public service but is, in addition, an integral part of maintaining programs which correspond to constituents' needs.

3. Thorough evaluation of the conditions under which current research priorities are established must be undertaken. Such a task force must focus upon efforts to make advisory committees more responsive. In addition, a careful review of how research funds are allocated is needed. Current evidence suggests that the size of a land grant college experiment station in a given region is a far more influential factor in research appropriation that the human needs of the rural sector of that region. In addition, such a task force should seek to change the general drift of agricultural research toward greater specialization and segmentation.

4. Some rural development activities are likely to remain a function of USDA. It is imperative that they be given greater visability and authority to pursue coordination. Section 603(b) of the 1972 Rural Development Act gave USDA responsibility for promoting what has been only a modest voluntary inter-departmental coordination of rural development activities. It is clear that the Rural Development Service (RDS) has not enjoyed a well defined role in furthering such coordination. To strengthen RDS, the following recommendations are proposed:

a. In order that RDS may carry out its coordinating role, mechanisms must be established through which rural development issues are identified and systematically pursued in every federal agency.

b. RDS must be maintained as a separate and visible agency at USDA.

c. RDS should be encouraged to continue, to publicize, and to expand its FAPRS (Federal Assistance Program Retrieval System), and current activities in training rural leaders.

d. A strong and permanent research function should be assigned to the RDS.

e. After creating such a research division, it should be used within RDS to launch the often proposed (but now buried) National Rural Development Information System (NRDIS) whose original mission was to collect, interpret, display and diseminate research, program and performance in the field of rural development.

f. A primary requirement of any operation like the proposed NRDIS is that data be provided to rural units of government to be utilized in grant application. Although, FAPRS now serves to tell local organizations what programs exist, no single, accessible data source provides information required by grant applications concerning local conditions. This latter point is worthy of repetition: The suppression, under enumeration and lack of access to data for rural people seriously retards rural program implementation as well as prohibiting researchers from accurately analyzing the characteristics of rural populations.

Regardless of its agency or departmental locus, a Rural Area data base must be developed post haste. It should have the following features:

a. It must be organized to utilize units of analysis sensitive enough to respond to rural program needs, yet large enough to avoid violation of individual or family confidentiality (e.g. minor civil divisions).

b. It must utilize units of analysis which are meaningful to local people and which have the capacity to represent the unique requirements of local areas.

c. It must be based on data which is reasonably up-to-date and thus must have the capacity to take in reports from the field.

d. It must have the capacity to feed back useful information to rural people utilizing units which correspond to local governments and similar organizations.

Specific Research Needs

A host of rural research needs are currently so pressing that they simply cannot wait for an appropriate bureaucratic home. These are listed here as recommendations.

a. A systematic review of metropolitan and non-metropolitan, rural definitions should be undertaken. Currently five different definitions emerge as dominant from a host of others. While we do not advocate a single definition of rural, a specification of the criteria employed and the resulting distribution of population in federal program utilization of these varying definitions must be made clear *each every time the label* "non-metropolitan" is used.

b. A systematic and exhaustive identification of rural peoples must be undertaken to prove program equity. Currently, no objective criteria exist in the designation of certain eligibility categories. Four areas come immediately to view.

(1) *Manpower Statistics.* No comprehensive treatment of employment status now exist for rural people. In what the economists refer to as the "marginal" work world in which many rural American participate, urban definitions of employment simply do not apply. As seriously, major flaws exist in the collection of federal unemployment data which effectively exclude counts for smalltown and open country Americans. Similarly, gross ignorance characterizes our research grasp of rural occupational diversity, migrant status, and the working conditions of many rural Americans. While all of these are interrelated, no clear criteria now exist in program design which focus upon any of these characteristics of the rural labor force.

(2) *Program Eligibility Criteria.* Many progams now emphasize assistance to specific "disadvantaged" rural minority groups. These are programs which respond to particular needs of relatively isolated rural peoples. However, the eligibility status of other minority groups, equally in need of said program assistance, has never been systematically addressed. Thus one finds school systems in Northern New England with bilingual French-Canadian students who are barred from eligibility for programs which simultaneously serve to assist bilingual problem areas in the Southwest. Similarly, one notes the termination of official recognition for many Native American groups as well as the denial of tribal status for many others. Equity of recognition is the big issue here; this requires systematic ethnographic research into the specific needs of disenfranchised rural minority groups.

(3) *Data collection* depicting conditions of the nation's small farms must be maintained. Recent attempts to redefine the American farm would exclude some 20% of the farms now included in Agricultural Censuses. Regardless of the issues concerning scale of farm operation, this redefinition represents a serious loss of data and research continuity for a very significant dimension of rural life. It is recommended that the most inclusive definition of small farm be maintained in research efforts. Moreover, serious issue has been raised with the quality of existing data on small farms. Both the quantity and quality of this data, must be improved through coordination of USDA and Bureau of the Census researchers.

(4) *Small Town Needs.* It is noted that in most rural areas one of the critical units of local decision making is the small town. These communities have been virtually ignored in the published census reports of detailed social and economic characteristics. Thus, this information is not available to local policy makers. It is recommended that all rural researchers operate at an interagency level and seek to thoroughly explore mechanisms for the dissemi-

nation of vital data concerning rural populations that are capable of being understood by rural peoples and capable of being analyzed by rural researchers who are without the urban based complex of computer skills and technologies. In this process, we insist that census people maintain the integrity of the rural community. This means the public presentation of detailed economic and social population characteristics for small, rural places, a move away from traditional policy which has aggregated valuable data to county and state totals, thus making irretrievable vital information on rural places. All of these concerns must be articulated before the 1980 Census is conducted.

STATEMENT OF DON F. HADWIGER, DEPARTMENT OF POLITICAL SCIENCE, IOWA STATE UNIVERSITY

The history of the agricultural research and extension "establishment" reveals a bias against the poor (or small) farmers, in favor of the larger, "innovative" commercial farmers. This has been a severe bias, providing little or nothing to rural poor people, indeed undermining their economic and social status, obliging most of them to migrate off the farm. Little credit is due to these public institutions of agriculture for the fact that many migrants fortuitously discovered a life elsewhere which satisfied them more than the one they had experienced in rural America.

In our overall agricultural policy, we have also failed to provide equity and stability for farm towns. Many small town businesspeople, left on their own in the midst of rapid change that was cushioned for commercial farmers, lost their assets as well as their livelihood.

Severe neglect and discrimination against the rural poor by agricultural research and extension, and neglect of the impact of change upon small town people, are thoroughly documented by presidential commissions, by the U.S. Civil Rights Commission, by congressional committees, and by scholarly studies. These events are among our major national tragedies, which need remedy to the extent that remedy is possible, not repetition.

But we should not assume that this history adequately characterizes the present activities or aspirations of agencies of rural development, any more than we should assume that the U.S. Department of Agriculture, which was our first great anti-poverty agency (during the 1930's and 1940's), has remained an anti-poverty agency. Yet the record of the recent past should be a concern of this committee, as it is a concern of farmer groups, welfare groups, environmentalists, and other public interest groups—many of which joined in legislative coalitions to support passage of the Rural Development Act of 1972 and the Food and Agriculture Act of 1977. These laws have provisions for helping small farmers, small towns, and other groups previously neglected.

I suggest that this subcommittee can play a role in representing this new coalition, which is balanced in representing interests affected by agricultural and rural development policy; further, that this subcommittee can provide the oversight function which reassures all groups that policies are not discriminatory.

Scholars have noted that the bias in U.S. agricultural production research—favoring larger, capital-intensive agriculture—seems almost inherent in our institutions and values, though with effort this bias may be reduced. In contrast, it seems to me that bias in rural development research and extension activities is less likely to be persistent. It is possible, for example, to direct efforts specifically to those communities and those groups which notably lack income and other resources. Such low-income rural communities exist in all regions, and of course there are areas in which virtually all rural communities fall into this need category. Extension and other rural development agencies have in practice often given first attention to these communities and groups.

Using the funds and people available, and despite the reluctance of the national government to provide funding for rural research, the agricultural research and extension agencies have taken a number of initiatives:

They have instituted the "essential process" referred to in the National Rural Center's review of Title V activities—the process which permits people of rural communities to decide what they want to do.

They have helped to establish regional governments which have in turn been very helpful in revitalizing non-metropolitan areas.

They have manifested the impulse, sooner than other decision-makers, to establish a data base on which good community decisions can be made.

Title V of the Rural Development Act of 1972 has helped to reorient social and economic research to the practical needs of rural communities. Another type of federal research initiative helpful in moving an institution toward serving rural social needs is the rural housing research unit under the former Agricultural Research Service. The recommendation by USDA not to fund Title V or the rural housing unit tends to stop these research institutions in their tracks, to discourage them from moving to meet the needs which Congress has mandated in authorizing legislation.

A major point to keep in mind is that rural people and small communities need help—in order to be competitive for public subsidies and private economic resources, in order to compensate for the loss of agricultural jobs, and in order to catch up.

A second point is that our land grant colleges research and extension service, and our federal agricultural research agencies, have begun to prove that they can be helpful. There may be other private and public agencies which can also provide good research and education, but the bulk of rural research is concentrated in agencies under the USDA.

Statement of Lee Day, Director, Northeast Regional Center for Rural Development, Cornell University, Ithaca, N.Y.

My name is Lee M. Day. I am Director of the Northeast Regional Center for Rural Development located at Cornell University.

The Hearings Outline distributed by your office indicated a concern with research priorities in the Land-Grant System. I will describe some of the advisory systems used in the Northeast region of the United States. I will also make some observations about these systems.

While the ultimate responsibility for the allocation of research funds among competing projects and programs rests with the experiment station directors in the various states, these allocation decisions are made with the benefit of information received from a variety of advisory systems; the research-extension or College of Agriculture Advisory Committee, the regional research planning system (a part of the national planning system), the Executive Branch and the Congress, and the State Rural Development Advisory Council mandated by Title V of the Rural Development Act of 1972 (sometimes supplemented by local advisory committees) and a variety of formal and informal advisory systems.

AGRICULTURAL ADVISORY COMMITTEES

A typical College of Agriculture Advisory Committee is made up largely of successful farmers, leaders of commodity organizations, cooperatives, and general farm organizations. Lessor representation from such diverse groups as rural bankers, League of Women Voters, local government officials and seed and fertilizer dealers may be found. Generally at any particular meeting of the advisory committee, the chief college administrator will present a review of the total college program, but major attention is devoted to only a portion of the college program. Faculty or administrators describe in some detail a particular set of activities—successes, failures, problems and potential. Members of the advisory committee then respond with criticisms and suggestions based on their own experiences. The ensuing discussion is generally the most fruitful part of the advisory activity, although a brief set of formal recommendations is often submitted to the college administration at the close of the meeting, along with suggestions as to programs to be reviewed in depth at the next meeting. Advice may be given on such broad issues as how to cope with rapidly rising costs and relatively stable budgets or relative emphasis on basic and applied research and, specific suggestions may be made on particular research or extension programs.

NATIONAL AND REGIONAL PLANNING SYSTEMS

The National and Regional Research Planning System has its roots in the "Long Range Study" made in 1965-66. The study was mandated by the Congress and jointly sponsored by the U.S. Department of Agriculture and the

National Association of State Universities and Land-Grant Colleges. The findings and recommendations of this study were published by the USDA in "A National Program of Research for Agriculture," October 1966. Out of this Long Range Study came a number of changes including the (1) development and adoption by the USDA and the State Agricultural Experiment Stations of a system of research classification; (2) development and implementation of the Current Research Information Retrieval System (CRIS); and (3) evolution of the current mechanisms for regional and national planning of agricultural research built around the research classification system. Presumably the hearings yesterday provided considerable information about the research classification system and CRIS.

Time does not permit a full explanation of the National and Regional Research Planning System. For our purposes here, it may be sufficient to describe the system of research program steering committees utilized in the 12 northeastern states. To date research-program steering committees have been formed for 10 of the 40 research programs identified at the national level.[1] These 10 programs contain in excess of 80 percent of the present total research effort in the experiment stations in the Northeast. The essence of the system of Research-Program Steering Committees is that they are a joint operation of the Northeast Regional Association of Experiment Station Directors and the USDA. The Northeast Directors Association names a co-administrative advisor and a co-chairman and the USDA, usually represented by ARS, names a co-administrative advisor and co-chairman. These 4 people, after consulting with other researchers and administrators, identify the committee membership. They nominate persons who represent the researchable problem areas within the general area of responsibility of the steering committee. The membership of the committees is in most cases predominantly research scientists, although it is considered appropriate to solicit membership from industry, consumers and other interest groups.

In the specific case of Rural Development, the Steering Committee has not yet made its report to the experiment station directors, but I can tell you something about the committee. It is made up of 7 social scientists from the ESCS, USDA, 10 social scientists, and one agricultural engineer from the experiment stations in the twelve Northeastern states. While the steering committee does not include any non-researchers, it drew on priority recommendations of ad hoc committees (e.g., community services, housing and economic development) which included Cooperative Extension Service specialists and field staff and other research users.

In the Northeast these research program steering committees have developed or are developing a set of priority recommendations for the experiment station directors—to rank research topics, to estimate the manpower needs to study each topic, and to take an active part in the implementation of such research plans.

SOME OBSERVATIONS ON COLLEGE ADVISORY COMMITTEES AND REGIONAL SYSTEMS

The experiment station director is the one ultimately responsible for the allocation of research resources within his station. He cannot and does not delegate that responsibility to an advisory committee or a planning or steering committee. But an agricultural experiment station director is typically trained in only one discipline and seeks advice from a variety of sources, both within and outside his own state.

The research planning system, including the steering committees described above is a formal advisory system. The research-extension or college advisory committees in the various states are another type of formal advisory system. It is my observation that the college advisory committees are largely dominated by agricultural production and marketing concerns. Clearly the bulk of information supplied by the 10 research program steering committees in the 12 Northern states will not be directly concerned with rural development. One might well ask, is the long standing tradition of agricultural production and marketing research so deep rooted and the formal and informal advisory systems so biased in favor of agricultural concerns, that research and extension activities in rural development do not stand a chance in the Land-Grant system? Clearly such a question could have been in the minds of Congress when it approved Sec. 503 of the Rural Development Act of 1972. That section, among other things, mandated for each state a State Rural Development Advisory Council to include representatives of farmers, business, labor, banking, local government, multi-county planning and development districts, public and private colleges and Federal and State agencies involved in rural development.

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[1] The research programs include Dairy, Amenity Horticulture, Forage, Fruit, Vegetables, Forestry, Environmental Quality, Food and Nutrition, Marketing and Competition, and Rural Development.

The data supplied by the Science and Education Administration (that portion formerly known as CSRS) may not be as definitive as one would like. Nevertheless, these data do not support the contention that Rural Development research is declining in the Land-Grant system. In 1970 the experiment stations in the 12 Northeastern states had slightly more than 50 SY of Rural Development research effort supported by about $511,000 of Federal funds administered by CSRS and $1,283,000 of State funds. In 1976 there were more than 83 SY of rural development research effort supported by approximately $1,467,000 of Federal funds administered by SEA-CR and nearly $3,090,000 of state funds. An increase of 33 SY of effort in rural development research in the Northeast in the 1970-76 period cannot be considered trivial. This is especially true when one considers that practically all of the total increase in SY effort in that period by the experiment stations has been concentrated in the Rural Development area.

Yet to put rural development research in perspective one must consider the total amount of research effort. In 1976 the 83 SY of rural development research represented about 8.8 percent of the total research effort in the total research effort conducted by the Agricultural Research Service, the Forestry schools, the State Agricultural Experiment Stations, and the 1890 Institutions in the Northeast. With the caveat that much depends on the definition of rural development—what is included and what is excluded from rural development research—it appears to me to be reasonably accurate to characterize rural development as a small but growing research activity in the Northeast region. Clearly those concerned with rural development, both inside and outside the Land-Grant systems have grounds to be disappointed with the absolute magnitude of rural development research but are at least somewhat encouraged by the rate of growth.

THE EXECUTIVE BRANCH AND THE CONGRESS AS "ADVISORS" TO THE RESEARCH AND EXTENSION SYSTEM

Clearly the Federal system is more than simply an advisor to the research and extension system. The Executive Branch requests and the Congress appropriates funds for the state agricultural experiment stations and the cooperative extension services under the Hatch Act, the Smith-Lever Act and the Rural Development Act of 1972. Title V of the Rural Development Act of 1972 represents a potential for major redirection of research and extension efforts toward the problems of rural communities.

The Rural Development Act of 1972 was innovative in a number of ways not the least of which was to include in the same Act both titles for action programs, largely loan authorities, to assist business, and local communities and a research and education title designed to create a university based process through which citizens in rural communities could have available to them a wide range of resources to help them make decisions about problems and opportunities of their own choosing.

This packaging of action programs and research-extension programs in the same Act represents a clear recognition by the Congress that throwing money at problems is not a sufficient rural Development strategy. Important as they are, loans are not enough. They have to be repaid. Neither the available loan funds nor the ability to repay are likely to be sufficient to cover all the needs of rural communities. People in rural communities face some hard choices. Which is more important to them, a sewer system, a water system, a medical center, or a low income housing project? How much is each of these improvements likely to cost? How large do these systems need to be? Is the community likely to grow or decline? The informational needs of rural communities are indeed large, as well as site-specific, and a high value is attached to timely information.

As you know, Title V of the Rural Development Act of 1972 authorized a three-year pilot program with a clear indication in the legislative history that the program should be evaluated. The National Rural Center completed and published that evaluation in the Fall of 1977. The National Rural Center also prepared a policy statement entitled "The Essential Process: For a Successful Rural Strategy" (Cornman and Madden, December 1977). This policy statement defines what the authors refer to as an essential process, summarizes their evaluation of Title V as a process and makes 33 recommendations.

The evaluation of Title V was generally favorable. Yet the executive budget for FY 1979 contained nothing for Title V. In all fairness the report on the evaluation probably appeared too late to become a part of the decision-making process for the executive budget. But the administration has not shown any enthusiasm for reconsidering its decision with respect to Title V.

Apparently the Administration has little understanding of, or appreciation for, the importance of the local decision-making process. Perhaps Cornman and Madden of the National Rural Center summarized it best in their operational guidelines. "The essential process in rural development should:

"Begin with the meaningful involvement of local people and their representatives in decisions establishing community priorities, policies to be pursued and specific projects to be implemented.

"Help rural people obtain needed information in a timely manner, and then provide organizational structures to facilitate the making of rational choices and trade-offs among competing goals.

"Encourage development of linkages between rural communities and the various public and private agencies to make the best use of government programs and other funding opportunities.

"Remain professionally objective and non-biased, in that it should not become the handmaid of any local vested interest or faction or any ethnic majority or minority. It should be available to all rural citizens, but with emphasis on serving those communities deprived of essential services and facilities, areas of high unemployment, places threatened with severe environmental degradation, etc."

Expanded funding of Title V by the Congress will send a signal to research and extension, and to local people as well, that the Federal government is really serious about improving the situation in rural communities.

STATEMENT OF THOMAS W. DOWE, DEAN, COLLEGE OF AGRICULTURE, UNIVERSITY OF VERMONT, BURLINGTON, VT.

RURAL DEVELOPMENT ISSUES AND OPPORTUNITIES, VERMONT—A CASE STUDY

I welcome the opportunity to appear before this committee and bring to your attention some of the issues in rural development as I see them in Vermont.

Vermont is truly a rural state. Only one other state in the U.S. (Wyoming) is classified by the Bureau of the Census as having "no metropolitan areas."

Rather than attempting to develop an all-inclusive list of issues, I would like to highlight a few where I see major opportunities for improvements in rural life.

INCOME

Situation.—Income in Vermont is low. Only 12 states in the nation had average income per capita in 1975 which was lower. Within the state the greatest poverty is in rural areas. Most of our existing social problems can't be solved until income levels rise.

Opportunity.—Most rural Vermonters want to stay in their "home town" and will stay if jobs become available. This calls for a well designed plan to improve the economic climate and create a sound rural business environment.

Role of the land grant university.—The Extension Service plans to conduct training programs for rural residents to upgrade competency levels and business skills in preparation for either opening a small business or working for someone else. On campus, our Agricultural and Resource Economics Department has outlined an undergraduate program designed to prepare the student for a leadership role in our small rural communities.

POPULATION

Situation.—Rural Vermont experienced a significant increase in population between 1970 and 1975. One out of four of our rural communities had population growth exceeding 20 percent in that 5-year period. Another 33 percent experienced a growth rate ranging from 10 to 19 percent.

Opportunity.—In-migrants represent new blood in community life. Most of these people are concerned citizens and anxious to play an active role in community affairs. However, wise planning on the part of town officers is necessary to accommodate this new growth.

Role of the land grant university.—Research is underway at the University to measure migration into rural communities and identify problems associated with this growth. The Extension Service with its CRD staff is working with community leaders to develop viable plans to assure orderly growth.

COSTS OF LOCAL GOVERNMENT OPERATIONS

Situation.—Costs of local government operations have risen dramatically in recent years. Small towns need assistance in fiscal management and a re-evaluation of the community services delivery system.

Opportunity.—While most small communities are "self-contained units," an opportunity exists to reduce governmental costs by such means as pooling resources and jointly purchasing equipment or sharing personnel.

Role of the land grant university.—A Northeastern States regional research project has just been completed looking into community services delivery systems in general. This research will provide the Extension Service with the tools needed to address and evaluate existing service systems and their cost.

The Extension Service and its county level organizations are in an ideal position to explore mutual undertakings between communities as a way of reducing governmental costs and providing higher quality community services.

PROFESSIONAL SERVICES

Situation.—Professional services, especially medical, are concentrated in the more urban areas creating a serious void in rural areas.

Opportunity.—The development of regional medical centers in rural areas needs to be investigated in terms of costs and incentives needed to attract staff.

Role of the land grant university.—The University of Vermont has a fine medical college which is greatly concerned with this problem. A joint research project between the agricultural college and the medical college might be most fruitful at this time.

INTEREST IN SMALL FARMS

Situation.—After World War II, there was a significant decline in the number of small farms in Vermont. However, in more recent years there has been a growing interest in a small farm operation to supplement income from other sources.

Opportunity.—As an economic entity the small farm shows up rather poorly in terms of profitability. However, as a source of *supplementary* income or a source of food for home consumption such operations makes a great deal of sense.

Role of the land grant university.—The Agricultural Experiment Station at the University of Vermont is developing a research project to explore the possibilities associated with small scale agriculture. In this investigation, nonmonetary benefits will enter into the evaluation.

Most individuals considering a small farm enterprise have had little agricultural training. Our county agricultural agents and state specialists have developed useful educational programs to work with this group. A continuation of this program is anticipated.

FOOD FOR HOME CONSUMPTION

Situation.—Both rural and urban residents in Vermont have turned to the home vegetable garden as a means of counteracting inflation and rising food costs. Much of the food which is produced is processed for later consumption.

Opportunity.—Many rural residents don't own land suitable for gardening. Community gardens which have been so successful in urban and suburban areas can be important in rural areas and serve to raise the overall nutritional level of rural residents.

Role of the land grant university.—County agricultural agents and state specialists are currently providing educational assistance in gardening. Home economists are engaged in educational programs related to food preservation.

WOOD AS A SOURCE OF ENERGY

Situation.—Both rural and urban homes in Vermont are increasingly using wood as a source of heat. Also, wood is being considered as one source of fuel for the generation of electricity in the state's largest city (Burlington).

Opportunity.—About 75 percent of the land area in Vermont is wooded. Such a vast renewable resource may play an important role in meeting a portion of our energy requirements in the not too distant future.

Role of the land grant university.—Research is needed at the present time to weigh all costs and benefits associated with wood as a source of energy. Research "on paper" must precede large scale transformation away from existing energy sources.

FARM AND FOREST PROPERTY TAX STABILIZATION

Situation.—In April 1978, Vermont Governor Richard Snelling signed into law a bill which empowers rural communities to enter into tax stabilization agreements with farmers and owners of forest land.

Opportunity.—If properly used, this legislation will enable farmers and forest landowners to continue operations without fear of "being taxed out of business." This will not only benefit individual landowners but will serve to keep Vermont a truly attractive state.

Role of the land grant university.—Community officials need assistance in drawing up realistic contracts with individual property owners. Extension CRD staff is well equipped to provide such assistance.

RURAL HOUSING

Situation.—Rural housing is a critical problem throughout Vermont. The 1970 Census of Housing describes well the magnitude of the issue. Planning and zoning ordinances adopted in many Vermont communities call for large lots (10 acres in many cases). While such an ordinance slows down development, it increases the community service delivery cost and discourages new construction.

Opportunity.—Communities must look to alternate forms of housing and consider innovative energy-efficient housing to meet the needs of rural residents.

Role of the land grant university.—Research is vitally needed at this time to evaluate the costs and benefits of large lot zoning. The results of such research need to be disseminated immediately to rural area planners. Time is of the essence in this case.

CONCLUSION

In this short presentation I have attempted to bring to your attention some of the more critical issues that I see in rural Vermont. Also, I have tried to indicate what I feel is the appropriate role of the Land Grant University in resolving these issues.

I would like to see a greatly expanded role of the University in this area. We need to do more to equip our students to become better leaders in these rural areas; we need to do more research so that our recommendations are more meaningful; we need to expand our Extension educational program in rural areas. With the increased emphasis on resolving urban problems in this country, I hope we don't forget the plight of our rural sector.

As I mentioned earlier, Vermont is one of the most rural states in the U.S. We have problems and are looking for solutions. Vermont is a small state and could well serve as a "testing ground" for new approaches to rural development. We would welcome such a program.

STATEMENT OF LEE KOLMER, DEAN, COLLEGE OF AGRICULTURE, IOWA STATE UNIVERSITY, AMES, IOWA

Senator Leahy, I am Lee Kolmer, Dean, College of Agriculture, Iowa State University. I am pleased to have the opportunity to share some thoughts with you about rural development research and extension in the Land-Grant Universities.

First, let me say that defining rural development research from a scientific point of view is very difficult to do. Rural devleopment is more a political than a scientific term. Each person's definition is an exercise which has much in common with an umpire's explanation of calling balls and strikes: "it ain't nothing until I calls it." For the most part rural development research and extension is aimed at providing the best possible information to nonmetropolitan citizens and policy makers involved in decisions concerning jobs and incomes (economic development), community facilities and services, housing, environmental quality and the leadership and organizational processes required to obtain improvements in these areas. Most, but not all, of the decisions to be made require group decision and action. Most, but not all, of the decisions involve a combination of local, state and/or national level decision makers and funds. Most, but not all, of the decisions require information and/or data analysis.

The major problem in this area of research and extension is that more needs to be done in order to meet the information needs of citizens and policy makers and planners at *all* levels. This is particularly true in view of the increased loan and grant funds being made available to rural areas. The shortfall in the amount of research and extension now being done is the product of several factors. Noteworthy are the following:

1. Strong and understandable competition of available research dollars to support priority work in agriculture. Studies in recent years have repeatedly highlighted the need for new knowledge in production agriculture to assure long-term food production capacity in the U.S. and the world.

2. No "real" growth in USDA support for research within the Land-Grant Universities for several years. In addition, there has been a serious erosion of "real" dollars in the Title V program under the Rural Development Act of 1972. The research portion of Title V has received 1.5 million dollars per year since FY '74. These two factors, coupled with the earmarking of research dollars for mission oriented research within the regular Hatch funding, has left very little opportunity for Land-Grant Universities to increase rural development research.

3. The continuing gap between the administration's rhetoric about rural development and the level of budget askings for providing a sound information base for rural development decisions and investments sends a very strong message to the land-grant university community. That message is that rural development is really not very important. Nonetheless, states have continued to support this area.

One explanation of the low priority for this area within the federal administration may be the lack of a strong and organized constituency pressing the case for added resources. The absence of such a support base may be a reflection that the need is neither research nor extension in the traditional sense of those areas. It is a mix involving the full continuum from knowledge discovery to information transfer. At least four types of research and extension are needed:

1. *Conceptual research.*—This is research needed to discover the nature of community structure and functions. Such research would clarify the interrelationships and the processes necessary to assist communities in the pursuit of their goals.

2. *Information accumulation.*—This "research" draws together information relevant to community development in both macro and micro situations. The effort is also made to synthesize the relationships into a body of knowledge which can be applied elsewhere.

3. *Problem identification.*—The work in this area probes through the symptoms to identify the causes of problems. Such "research" may require the use of objective as well as subjective data, but in either case it is hard-headed, rigorous analysis that is needed.

4. *Problem solving.*—The task here is to bring information to bear on a specific problem which exists in a specific time and place. The task is usually applied and unique enough that findings from other studies cannot be applied without change or checking.

The last three types of "research" have several characteristics which make a difference in the organization of and resources required to do rural development research and extension. Among the more important differentiating characteristics are the following:

1. Much of the needed information is location-specific. Feasibility and needs assessment studies must be conducted at each location. This characteristic generates an enormous demand for applied studies, which are repetitive from the viewpoint of faculty. These are the social science counterparts to outlying farms and test plots.
2. The time frame for the required information is usually quite short.
3. The research to be done needs to be designed and conducted in a process of interaction between local people, researchers, extension staff and program administrators. This orientation to problems at the community or multi-community level often requires involvement of several disciplines and may result in several short term projects rather than a long-term research program, as would be the norm in (say) plant breeding research. This approach is a necessary component to the Essential Process of rural development outlined by the National Rural Center.

In sum, the conduct of a successful rural development research and extension program is an enterprise which requires some modification of the traditional research and extension process. It is a knowledge development process. It is an information packaging and interpretation process. It is a repetitive process. It is a joint effort of the specialist and the decision maker. It is problem oriented and an endeavor which is complementary to basic research, but which cannot be substituted for by other approaches.

The Title V program evaluation prepared by the National Rural Center identified many instances of effective rural development research and extension. In our own state (Iowa), one research and extension effort focused on citizen's definitions of "the good community" in 27 communities in a six county area. This project provided the information base for many community decisions and actions (e.g., the formation and funding of a private non-profit health manpower recruitment organization, a transportation planning grant, and changes in the retail sector of several communities) as well as area wide activities during the last three years. The project was an integrated effort which involved researchers, extension staff and local citizens from the beginning. The problem is that the same research and extension effort needs to be done throughout the state—not in just six percent of the state. A central finding of the national Title V Evaluation Study was the conclusion that only a fraction of the need and opportunity had been addressed.

The substantive research and extension needs in rural development run the full gamut from the basic to the applied. Among the important areas which have been identified by several regional and state committees of research and extension workers are the following:

1. Research and extension programs related to needs assessment, financing, delivery and organization of community facilities and services. This includes public and privately provided services such as health, social, sewer and water, housing, solid waste disposal, streets, transportation, police and fire protection, libraries, recreation and the like. This is a massive area of need. The list of specifics could provide a full agenda of work for years in any state.
2. Research is needed on the interactions of impacts of population migration and economic development within the context of natural resource policies being developed in areas such as land use, air and water quality, and energy conservation and development.

In closing, let me say this. Many times in recent years I have heard representatives of OMB, the administration, Congress and others suggest that all that is restraining the land-grant universities from providing assistance to rural communities is their unwillingness to reallocate resources from agriculture to rural development. I submit to you that this is largely the result of conventional wisdom and the adoption of uninformed rhetoric. We are not talking about a case of recalcitrant faculty and administrators unwilling to address the problems of rural communities. They are willing and able, and will do so if resources are provided. The evidence supports the fact that increased attention has been going to this area, in spite of a decrease in "real" federal dollars. What we are talking about is a request by citizens to address a large set of problems by a system uniquely designed to reach and serve the rural areas—the land-grant universities. What we are also talking about is the need for the federal government, as well as the states, to support that endeavor and stop being naive and unrealistic about the resources required. What we are talking about is the need for dependable funding with at least a three year forward planning horizon. We are not talking about the need for continuously reshuffling or renaming the organization. That approach creates a lot of motion, but no substance.

STATEMENT OF LOWELL H. WATTS, DIRECTOR, COOPERATIVE EXTENSION SERVICES, COLORADO STATE UNIVERSITY, FORT COLLINS, COLO.

THE ROLE OF COOPERATIVE EXTENSION IN RURAL DEVELOPMENT

On behalf of the Extension Directors of this nation may I express to you our appreciation for your efforts to examine the processes of rural development and to consider some of the governmental interventions which can be constructive in meeting the problems of rural America. I will address my comments primarily to functions of the Cooperative Extension Service and some of the ways that we believe Extension can be and has been effective. As we perceive it, Rural Development consists of many factors. Obviously, a healthy agriculture is one of them. Few will debate the effectiveness of our Extension Services in transmitting research information to assist the American farmer. Under Title XII of the International Development and Food Assistance Act of 1975, our research and Extension capabilities are now being called upon to an increasing degree to assist less developed nations in their development efforts with agriculture and human nutrition as the base. However, since the role of research and Extension in agriculture is generally understood and accepted, I will concentrate my comments upon some of the Extension educational programs related to rural development in the U.S. that may not be as obvious nor as well recognized.

Rural communities in this nation today are being impacted by a variety of pressures. In some, explosive growth is causing serious problems. Even though we tend to think of rural development as an activity to maintain social and economic viability of declining communities, I would call to your attention the fact that expanding communities also are under severe pressures. In my own state of Colorado, for example, the pressures of the extractive industries, both coal and oil shale, are causing explosive growth in Northwestern Colorado. The ski industry has had the same impact in areas such as Vail, Steamboat Springs and Breckenridge. In these communities the front-end costs of development exceed the financial capacity of local citizens. Schools are inadequate. Spare housing is nonexistent. Hastily constructed trailer courts pose problems in terms of sanitation, water supplies, security, recreation facilities and opportunities for the youth. Community identity is blurred or lost. City sewage systems are overtaxed. Seasonal or transient labor must be dealt with in a community which may have previously had a stable, homogeneous population base. There is a concern about the need for integration of newcomers and their values with the long term community residents. This requires the development of a community atmosphere within which the various groups can share meanings and work on common concerns.

Consider then areas of stable or declining population where local facilities may not be as much of a problem as the financial base necessary to provide for the needs of the community and where the decline in job opportunities, social services, recreation, health and other activities leads young people not only to seek employment away from home but to find unconstructive outlets for their youthful energies. In some of these smaller communities new federal regulations regarding sewage effluent standards, occupational safety and health modifications and attempts to provide adequate health services and facilities have led communities to a position of bankruptcy.

There is a considerable base of knowledge within the scientific community that can be helpful to communities whether they are suffering from stagnation or explosive growth. There is information provided through our Land Grant system that can be used by county and city planners and by county commissioners. And through the Extension Service there is an existing educational program which is admirably designed to relate to local communities and their problems. Furthermore, the leadership of Extension professionals in community educational programs serves in a catalytic way to help mobilize community resources, including local leadership to resolve locally based problems. Thus, scientific and community knowledge can be blended to strengthen local ability to deal with the problems they face and increasingly gain more control of their own destinies.

A primary problem of many smaller rural communities is their lack of professional expertise to deal with development problems. There is a lack of organizational leadership and there is all too often a tendency for the lower income and minority population to be ignored in the process of community decision making.

In the past decade the Extension Services of the various states have developed considerable expertise in assisting communities to organize for problem solving. We have helped communities to develop a valid base of data on which decisions can be made. We have helped communities to develop the organizational capacity for appropriate and effective decision making. And our ties to other governmental agencies permit Extension to refer community groups to agencies having financial or technical capability to provide specific kinds of help. These activities can also assist the research component of our universities in defining priority research efforts appropriate to processes of rural development. Our concerns for an educational program in environment and natural resources can be blended into public policy education and community action related to land use, competition for land and water, planning and zoning, and related subjects. In our 4-H and youth programs one of the popular activities has been a project called Community Pride which has involved youngsters in community improvement. These sorts of activities can be particularly effective in smaller rural communities but have also proven highly effective in some of our areas of high population density.

Whether it be in the area of the agricultural sciences or in the complex social-political areas of community decision making, the Extension Service provides an outreach capability through our agents in the local communities whose job has historically been one of assistance through education and through helping people to help themselves. Our staff members in the field can greatly facilitate the articulation of community concerns and can help citizens mobilize necessary resources.

Providing dollars for rural development is highly important. Providing the expertise to make the appropriate decisions for priority use of dollars is in my judgment just as important, and from a taxpayer's standpoint, a highly critical ingredient in proper use of public funds. Extension can help people develop and select options most appropriate for meeting their own needs.

The Extension Services have been heavily involved in leadership of state and regional rural development committees. Our agents are involved with regional organizations of county government and with agencies of state and federal government. In addition, we are interested in and anxious to participate in providing the critical assistance to rural communities that will better enable them to take advantage of the full array of government assistance that might be provided in rural development. We are prepared to help local communities integrate the necessary resources from outside institutions and organizations with those already available in communities in order to foster a richer quality of life for the people in our nation's rural communities.

In this nation, we have sometimes been prone to tackle problems by throwing money at the problems. This has often led to confusion, wasted resources and distrust. The current executive budget appears to be taking the opposite approach that if the problems of rural development are ignored and unfunded, the problems will somehow go away. Neither alternative provides for optimum impact.

Our county agents live in the communities where rural problems exist. With extremely meager resources, they have attempted to relate their own concerns and knowledge of local situations and their ties to our research base to community needs and priorities. They have been involved in rural health, low income housing, cooperatives and even in training of small business owners and operators.

Informational and educational programs are needed by communities just as much as by farmers. The system is already in place and the Extension Services are prepared to take on a more significant role. We do need resources as well as identification of roles if we are to adequately assist both the research establishment and financial or technical assistance agencies.

Research and Extension programs of the Land Grant system have been characterized by continuity of funding, with considerable latitude for states to prioritize consistent with national goals. In rural development continuity is also important. Title XII of the International Development and Food Assistance Act has recognized the importance of shifting from one and two years assistance projects to longer term efforts. Development is a continuous, not a one-shot process whether overseas or in this country.

The Land Grant system cannot provide funding nor application of specific types of technical assistance in rural development. But it can provide two critical ingredients—often overlooked—researching of problems and conducting objective, locally oriented educational programs.

We may be criticized for lack of intensity in rural development. I would point out, however, as evidence of our sincerity and commitment that we have plowed in resources far in excess of those provided by the federal government. For example, in Extension alone, there are today approximately 500 Extension agents, over 200 paraprofessionals and 400 specialists working in rural development. The total salary and support costs for these people is about $38 million.

It is my understanding that Assistant Secretary Cutler has indicated that the Extension Community and Rural Development Program nationally requires a dollar support level of about $54 million and that he indicated approximately $20 million comes from federal funds with the balance from state and county funds. We are fully aware of the fact that the current level of activity is inadequate. I would point out, however, that of the $38 million commitment currently in place only $2.5 million is provided under Title V of the Rural Development Act and $1 million in federal Smith-Lever funds for rural development. The additional funding has either been reallocated from other federal thrusts in Extension or, for the most part, represents state and county support.

STATEMENT OF M. DIANE FIELDS, DEPUTY DIRECTOR, SOUTHERN RURAL POLICY CONGRESS

Mr Chairman, on behalf of the Southern Rural Policy Congress, let me thank you for affording me the opportunity to provide you with our thoughts on the present state of agriculture research and recommendations on how it might better serve southern black rural communities.

Let me begin by giving you a brief historical profile of the Southern Rural Policy Congress, SRPC had it beginnings on January 7, 1977 where individuals came together to form an organization that would impact on the problems of rural communities in the South. This organization grew out of an ever increasing awareness by practitioners of southern rural economics and social development that the individual voices had been falling on deaf ears in the legislative and executive arenas of government. The membership of SRPC consists of non-profit community based organizations that span nine states. They are: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, South Carolina, and Tennessee. The expertise of these organizations range from health care, to housing, black land retention, economic development, rural water, to cooperatives.

One of SRPC's goals is the design model for comprehensive approaches to rural development in the South. Research is the key to developing that model. To date, predominately all of the agriculture research in the South is compiled by the 1862 and 1890 Land Grant Institutions through the Cooperative State Research Services of the Department of Agriculture. There are approximately 130 Land Grant Institutions where at least fifteen hold the status of being 1890 Land Grant Institutions. The 1890 Institutions were originally black and remain predominately the same at present. The working budget of the 1862 Land Grant Institutions is 97 million dollars where the 1890 Institutions have a budget of only 14½ million dollars.

To date, there is very little published research and data on the black agriculturist in the United States. Historically, there were 3,000,000 blacks engaged in farming cultivating some 41,500,000 acres of land in 1909. These blacks were migrant workers, sharecroppers, tenant farmers, part-time and full-time operators. Rural black farmers not only accounted for almost 70% of the total black population in 1910, but 30% of the total southern rural population and 40% of all southern farmers. Small farmers, whether they be black or white are disappearing under the combined onslaught of (1) modern agricultural technology, which raises the cost of farming beyond the means of the modest farmer and (2) agricultural and tax legislation biased to favor the large operator and the corporate operator. Although the greater portion of blacks who have left rural America were probably not land owners, the migrants and the causes behind the migrating are believed to have contributed heavily to a decline in black land ownership. Between 1950 and 1969, the amount of black owned farm land declined from 12 million to 5.5 million acres—a loss of more than 50%. This decline continues at this very moment when heavy industrial growth in the South is being projected, when some significant political and economic gains for southern blacks are emerging and when once again, agriculture has been made a promising industry even for the more modest farmer by the threat of a world food shortage.

It is very evident that this problem is devastating blacks throughout the South. There has been no detectable research by the Department of Agriculture to aid the farmer in alleviating the problems of land retention. Even in the area of technical skill research where a farmer's crops could determine his very existence, is there any detectable data. Most agriculture research is not geared toward the small farmer whether he be black or white. It supplies data to the larger or corporate farmer where the importance rests on major commercial agri-business. Invaluable research disseminated on facilities and equipment that could enhance the production on a farm cannot be utilized by the small farmer because again, it is geared toward the large or corporate farmer.

The Southern Rural Policy Congress is very supportive of agriculture research, it is undeniably a very important part of the Department of Agriculture and farmers in general, but if the Department is directing its research interests in the toward corporate farming, the small farmer will inevitably become non-existent. SRPC feels that a redirection in priorities is imperative by the Department of Agriculture in its thrust on state land grant research. Our recommendations are:

1. The Department should analyze the trends inhibiting the viability of the small farm.
2. Improve marketing systems and outlets.
3. Better farm machinery models geared toward the small farmer.
4. Research innovative models for small farm training curriculum, programs and institutions.
5. Legal research on inheritance tax problems for black landowners in the South.

After study of the present research areas of the Department of Agriculture SRPC is of the opinion that more research grants should be awarded on a competitive grant basis to non-profit community organizations, agencies of the state and local government and universities other than land grant. There is also the necessity for a more equitable appropriation to the 1890 Land Grant Institutions. If states refuse to comply then federal funds should be withheld. Finally, there should be mandatory representation by both consumer activists and small minority farmers on Land Grant Institution Advisory Boards, having input on overall policy and program evaluation, and ongoing monitoring of research priorities.

STATEMENT OF GERALD A. DOEKSEN,* ASSOCIATE PROFESSOR, DEPARTMENT OF AGRICULTURAL ECONOMICS, OKLAHOMA STATE UNIVERSITY

RURAL DEVELOPMENT RESEARCH AND EXTENSION NEEDS FROM A LOCAL VIEWPOINT

If the goal of rural development research and extension is to provide assistance to local decisionmakers, it is imperative that researchers and extension workers work closely with each other and with local leaders in solving rural development problems. In 1974, the Economic Research Service and extension service adopted this procedure for a pilot project in the Great Plains. The overall objective of the project was to assist local decisionmakers in the Great Plains in solving problems of rural development as they occurred at the local level. Northwestern Oklahoma, which has typical Great Plains economic and social conditions was selected as the study area. Researchers and extension personnel, working closely with sub-state personnel and state personnel, identified problems facing local decision makers, outlined research projects, conducted the research, and presented the results to local decisionmakers. Assistance continued with the research team, extension, and substate personnel working with the leaders throughout the decisionmaking phase and during the implementation phase, thus observing how and what research data were used and how decisions were made.

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* All views expressed in this paper are those of the author.

The project has been judged by others as being successful and I would like to share with you an overview of the approach, procedure, and methods used which made the results accessible and useful.

The majority of the research requests which surfaced were community service related. These requests can be categorized into three types of economic analysis. The most frequent type of economic analysis requested was a budget study of alternative delivery systems for a specific community service. Another type of analysis used with the budget study was projection and impact studies. As capital outlays are considered for community services, decisionmakers need projections of future growth such that sufficient capacity can be planned into the community service. In addition, community decisionmakers often desire to know the impact on their community of a specified change in their economy. Finally, the third type of analysis requested was determination of optimum location of certain services. Budgets are needed to complete this request and help determine optimum location and costs.

IMPACT AND PROJECTION NEEDS

A request which arose several times during the project and which was needed indirectly many times was an impact analysis and/or projections. Requests for impact studies arose from sudden change in the economic base, such as: (1) What will be the impact on the community of Purcell, Oklahoma from the location of a prison facility? (2) What will be the impact on the community of Enid, Oklahoma from the closure of the Air Force Base? (3) What will be the impact on the community of Lawton, Oklahoma from the new tire plant locating there?

Impact and projection tools

The question asked determined the analytical tool to employ. If the question related to the impact of some economic change, an interindustry model could be used. Some possible interindustry models are input-output analysis, from-to analysis, dynamic input-output analysis, or simulation.[1] If the basic interindustry data are not available for a community, a method exists to adopt a state or sub-state model to the community level. The method employs location quotients and is very useful for impact analysis at the community level.[2] For a situation where an interindustry model cannot be developed, a simpler tool, such as an economic base analysis, may be employed.

If the question which surfaces relates to projection of future population, a demographic model may be employed. In many cases, a state agency is responsible for population projections and will employ a demographic model to project population into the future for counties and some communities. If this is available, the researcher may adopt it. If not, he can develop a demographic model which can be used for the specific community.

Impact analysis need

Five miles from the community of Purcell, Oklahoma, which has a population of approximately 4,000, a major addition to the minimum security state prison facility is being constructed. The staff of the facility will be doubled after completion of the addition. The community leaders in planning for growth, desired an estimate of the impact the expanded facility would have on their community. An input-output model was available for the area. In addition, historical data as to where present prison employees live, payroll of new employees, family status, etc. were available. These data, as well as other input from local residents, a low and high estimate was made of 13 to 40 prison employees moving into Purcell. The low estimate will probably result if the leaders of Purcell take no action to attract prison employees to live in their community, whereas the high estimate will result if an all out effort is undertaken to attract prison employees to Purcell.

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[1] For a detailed discussion of these interindustry models, see [3].

[2] For a detailed discussion of the method, and the procedure for using the method, see [7].

In addition to the direct effects, secondary impacts will occur in other businesses. These secondary impacts (indirect and induced changes) are measured by income and employment multipliers derived from the input-output model. The employment multiplier was 1.677, whereas the income multiplier was 1.796. If the low estimate were to materialize, the total impact would be 22 new jobs in Purcell, whereas if the high estimate occurred then 67 new jobs would be created directly, indirectly and induced. Applying the income multiplier to the direct income effect, $208,000 income would be generated under the low estimate and $639,000 under the high estimate.

The next step is to relate the growth to community services and facilities. Local leaders surveyed all local services such as schools, housing, businesses, police, fire, hospital, etc. to determine availability and capacity. Based on information regarding family status of prison workers and family status of community residents, an estimate of the number and composition of new families was made. This data, along with information on present facility capacity and utilization, was used to estimate future service needs. For example, under the low estimate, the school system could expect 31 new students, whereas under the high estimate, 91 new students could be expected. Likewise, hospital bed days under the low estimate would increase to 41 and to 130 under the high estimate. Regarding housing, it was estimated that 17 additional living units would be needed under the low estimate and 51 under the high estimate.

The conclusions reached by the community leaders was that they had adequate capacity in their services (water, sewer, schools, etc.) to serve the high estimate. Their desire was to seek ways to attract the prison employees to their community such that the actual result would be near the high estimate. Their planned actions consisted of: (1) encouraging contractors and investors to construct living quarters as virtually no rental or purchase housing was currently available, (2) encourage industry to locate in their community such that jobs existed for spouses, and (3) to work with the prison placement officer to promote their community as a place where prison employees would desire to live.

BUDGET RESEARCH NEEDS

By far the greatest research demand stemming from our research project has been for budgets for various services. Farm management researchers have been using the budget for years as the foundation of much of their research. Likewise, community service researchers may need to learn from the farm management researchers and adopt the budget as the foundation of our research. Once basic budgets are available, more sophisticated models and analysis can be completed. Budgets under the Great Plains project have been prepared for rural ambulance systems, rural rental apartments, rural law enforcement, rural fire service, rural clinics, rural hospitals and for industrial sites. Because of space limitations, only the rural law enforcement budgets will be discussed in detail, while highlights of the other community service studies will be presented.

Budget needs—rural law enforcement [9]

Rural residents in the Great Plains are becoming increasingly concerned over low levels of police services. As a result, town officials and county commissioners are experiencing strong pressure to raise the level of police service. Local decisionmakers are requesting budget information which would allow them to evaluate alternative delivery systems. A research project was conducted which would provide information as to number of calls a service area could expect and costs of alternative delivery systems.

Procedure to estimate number of calls for police services.—Calls for police services were categorized into four major groups: (1) part I offenses, (2) part II offenses, (3) traffic and (4) other. Part I offenses include more serious crimes such as murder, rape and robbery, while part II offenses include crimes such as vandalism, driving under the influence and drunkenness. The traffic category covered both accidents and tickets. The fourth group, other, included animal problems and public service calls. Frequency data for the four categories were gathered from Uniform Crime Reports, Sheriffs' and police chiefs' records and the Oklahoma Department of Public Safety. These data, along with service area characteristics, were used in a regression procedure to develop predictive equations for the number of calls for police service. A decisionmaker simply enters his area's characteristics onto a form containing the predictive procedure to derive the estimated number of calls for police service. This information is extremely useful in the evaluation of expected manpower and equipment needs to meet estimated demand. Separate predictive procedures were developed for open country areas and municipalities.

Estimating costs of law enforcement services.—Cost of law enforcement services are largely dependent on the type of delivery system used, level of service provided, and size of service area. Alternative delivery systems considered in the analysis include (1) individual communities establishing or expanding their own police department, (2) establishing a police agency shared by two or more closely located communities, or (3) communities contracting for police services. Level of service was primarily defined in terms of hours of coverage and manpower employed. For instance, the level of service may be 24 hours a day, 7 days a week which would require a minimum of 4 officers. Size and characteristics of the service area influences the number of expected calls for police services and the manpower and equipment needed by a police agency. Cost estimating procedures were developed in this analysis which allow a decisionmaker to derive both capital and operating costs under alternative delivery systems, levels of service, and service areas.

Capital expenditures: Law enforcement capital items fall into two major categories: departmental items and retention facilities. Departmental items include vehicles, investigation, office and communications equipment as well as weapons and related items. Retention facilities include the costs of a lock-up facility and related items. Specific items included in cost estimates reflect recommendations of knowledgeable personnel in the field of law enforcement and costs were obtained from equipment dealers and correctional facility experts. Annual costs were derived by amortizing the capital items over their expected life at an assumed interest rate.

Operating Expenses: Operating items included personnel salaries, vehicle operation (i.e. gas, oil, tune-up and tires), office overhead and other items such as ammunition and traffic ticket forms. County sheriffs' and police chiefs' budgets were used in the determination of operating costs.

A set of forms were developed for a decisionmaker's use in estimating both capital and operating costs under alternative delivery systems, levels of service, and service area. In addition, once costs have been estimated for several alternatives, the decisionmakers can utilize a summary form to facilitate comparison of alternatives. This summary form is presented in Table 1 and contains cost estimates for alternatives for Medford, Oklahoma.

Estimated costs for law enforcement services in Medford, Okla.—In this example, the previously mentioned forms were completed for six alternatives. Each included a different delivery system, level of service or service area. Completion of Form I yielded estimates of the expected number of calls for police service under different service area configurations. These alternatives included the town of Medford providing its own police service, then the towns of Medford and Pond Creek in a cooperative effort and finally, the town of Medford contracting with the Grant County sheriff's department for police services. Forms II and III were completed and provided annual capital and operating cost estimates for each delivery system and level of service. These annual costs were then summarized on Form IV (Table 1).

For simplicity, it was assumed that Medford had no police department, but a communications tower and office space were available. A dispatcher was also assumed to be on duty for the same number of hours as an officer. In addition, no retention facility was included. From Table 1, estimated capital costs ranged from a high of $3.872 when police service was to be jointly provided at a level of 16 hours a day, 7 days a week, to a low of $2.608 when Medford was to provide itself with 8 hours of police coverage, 7 days a week. Under all alternatives, the annual capital cost of a vehicle accounted for the most expensive capital item.

FORM IV.—PROCEDURE USED TO COMPARE ESTIMATED ANNUAL COSTS OF ALTERNATIVE LAW ENFORCEMENT DELIVERY SYSTEMS

Costs:	(1)	(2)	(3)	(4)	(5)	(6)
Delivery system	Individual municipality	Individual municipality	Cooperative	Cooperative	Contract	Contract
Level of service:	24 h—7 d per week	8 hr—7 d per week	16 h—7 d per week	8 h—7 d per week	80 h—per week	40 h—per week
Capital:						
Vehicle	$1, 321	$1, 321	$2, 497	$2, 497	$2, 497	$2, 497
Equipment [1]	1, 170	1, 138	1, 151	1, 138	491	474
Uniforms	298	149	224	149	149	75
Office space	0	0	0	0	0	0
Subtotal	2, 789	2, 608	3, 872	3, 784	3, 137	3, 046
Operating:						
Salaries	49, 636	18, 784	37, 295	18, 784	13, 646	6, 823
Vehicle	1, 581	1, 581	4, 085	3, 506	2, 767	2, 767
Office overhead	0	0	0	0	2, 320	1, 160
Other [2]	200	200	200	200	200	200
Subtotal	51, 417	20, 565	41, 580	22, 490	18, 933	10, 950
Total costs	54, 206	23, 173	45, 452	26, 274	22, 070	13, 996

[1] Includes annual costs of investigation, communications, office, firearms, and auxillary equipment.
[2] Includes annual costs of ammunition, traffic ticket forms, et cetera.

Estimated annual operating costs ranged from $51,417 with Medford providing its own 24 hour—7 day police service to a low of $10,950 with the community contracting with the county sheriff for one full-time officer. Under all alternatives, salary expense constituted the bulk of the operating expenses.

Decisionmakers considering these six options would find that the contracting alternative with one full-time officer would be the least expensive while the alternative of 24 hour—7 day police service would cost the most. Decisionmakers could then decide which alternative provides their community with the level of desired police services, as well as the financial capacity required to support such a system.

Budget needs—rural ambulance service [*3*]

Discontinuation of ambulance service by funeral home operators created a crisis situation in several communities. Still, other communities were reevaluating their ambulance delivery system and seeking information as to costs and returns of alternative delivery systems. Because of these requests, a research project was designed to determine a method local decisionmakers could use to evaluate the alternatives confronting them. The project contained two main parts. The first consisted of estimating returns for a service area, while the second involved estimating costs of operating an ambulance service. For estimating returns, data related to ambulance calls were collected from 22 ambulance operators in the study area. From the data, a procedure to estimate ambulance calls for a service area was designed. The procedure classified ambulance calls into (1) highway accident calls, (2) transfer calls, and (3) other medical calls. Given local data, such as population by age cohorts and the research procedure, the number of calls for a given service area can be estimated. If population is projected to grow rapidly, here is where local projections are needed in community service planning. Once the number of calls is estimated, service charge adopted, and an estimate of payment is assumed, annual returns can be estimated.

The second part of the project consisted of determining capital and operating costs of providing ambulance service. Ambulance and communication equipment dealers were interviewed to determine costs of three types of ambulances and two communication systems. Operating expenses such as gasoline, tire wear, linens, oxygen, labor, etc. were obtained by interviewing ambulance operators in the study area.

To assist local decisionmakers in the Great Plains who face this problem, three forms were developed. The first form requires the local decisionmakers to enter local population data, specify several assumptions, and with these data, he can estimate the number of ambulance calls and the revenue for this service area. The second form was designed such that yearly capital and operating costs could be specified. This form, along with the form estimating returns, does not permit an easy evaluation of alternatives, thus a summary form was developed. The third form allows the decisionmakers to evaluate alternatives and select one which provides them the service they desire within their budget constraint. For example, the form could be used to evaluate costs of a fully staffed system, hospital based system, volunteer system, or some combination. With this data, the decisionmakers can evaluate the costs and quality of each alternative and select the alternative which they feel best fits their needs.

Budget needs—rural rental housing [8]

Shortage of housing, particularly rental units, was a concern of local decisionmakers in the study area. It was felt that increasing the number of rental dwellings would enhance the attractiveness of their community for location of industry as well as improve the quality of housing for current residents. Several community leaders were considering the formation of housing trusts or nonprofit organizations to sponsor construction of new rental units. However, they were in need of construction and operating costs of alternative types of apartment structures as well as guidelines for management practices and measurement of local demand.

Most communities in the study area are small enough to be eligible to apply for financing the apartment construction through the Farmers Home Administration's (FmHA) rural rental housing loan program. Several of these rural rental dwellings already existed in the Great Plains area, and FmHA cooperated to provide construction and operating costs on existing units. Excluding land costs, average construction costs per apartment were $12,711 and $11,634 for a fourplex and low-rise apartment respectively. Average annual operating costs per apartment without utilities furnished were $463 and $538 for a fourplex and low-rise apartment, respectively. Approximately $400 was added to the average annual cost of operation per apartment when utilities were furnished. These average costs are used to estimate annual total costs for financing and operating a rental enterprise of a certain type structure and number of apartments. Annual revenue was estimated simply by selecting several monthly rental rates, multiplying by 12 and then by the number of apartments. Estimation of revenue adjusted by percent of occupancy or percent of rent collected was also recommended. Estimating yearly profits or loss at various rates of occupancy or rent collection for selected monthly rental rates were calculated, using the cost and revenue estimates.

Along with the research results, three forms were devised such that local decisionmakers could evaluate the alternatives confronting them. In addition the final report [8] contains information regarding: (1) guidelines for a survey to estimate local demand, (2) management strategies used by existing rental apartment operators and (3) a summary of the FmHA rural rental housing program.

Budget needs—rural fire service [2].

An extremely dry year in many areas of the Great Plains in 1976 caused many local decisionmakers to evaluate and seek to improve their local fire departments. Again, local decisionmakers requested budget data and a research project was conducted.

Fire frequency rates were derived by gathering data from all fire departments in 10 counties in Northwest Oklahoma. Taking these rates, it is possible to estimate the annual number of fire calls for a given service area based on conditions within the service area. Capital items included (1) fire trucks, (2) fire stations, (3) communication systems, and (4) firefighter equipment. Data concerning costs were provided by dealers and contractors. Operating expenses provided by local fire chiefs included such items as communication repairs, utilities for fire stations, fuel for trucks, and labor costs.

Three forms were developed for local decisionmakers to use to analyze alternative means of providing fire protection for their service area. To demonstrate their use, the Northwestern Oklahoma town of Ames and its surrounding rural area was chosen as an example area. From Form I, it was predicted that 19 fires would occur during 1976 in Ames and the rural area it serves. Form II provided an easy method for calculating annual capital costs and equalled $2,376.

A brief summary of the annual capital costs and operating expenses were as follows:

Capital costs:	
a. Fire truck	$1, 103. 12
b. Communications system	935. 03
c. Fire station	932. 45
d. Firefighter equipment	155. 41
Subtotal	3, 126. 01
Operating expenses:	
a. Vehicle	419. 66
b. Equipment	57. 00
c. Labor	1, 116. 00
d. Fire station	784. 00
Subtotal	2, 376. 66
Total annual costs	5, 502. 67
Costs per fire	290. 00

Local decisionmakers in Ames would have to charge $290 per fire or obtain financial support that would total $5,502 annually if all costs of their fire protection were covered by users.

Since financing is a problem in many towns, several alternative financial arrangements are discussed in the report [2]. Training available through state agencies and organizations is also listed. In addition, state and federal regulations affecting the operation of fire department are explained.

Other budget requests

Local decisionmakers have indicated a need for budget studies related to industrial parks [1]. clinics [5]. and hospitals [6]. These have been developed along the same method as above, such that local decisionmakers can evaluate all alternatives. In addition, the publications contain summaries of federal and state laws, funding sources and other pertinent information.

OPTIMUM LOCATION RESEARCH NEEDS

In addition to budget information for a specific community service for a specific location, questions are surfacing from local decisionmakers as to where to locate certain facilities. This problem is extremely important when the local decisionmaker is concerned about emergency services such as ambulance, fire, and law enforcement since human lives and property are involved. Location analysis is also important for other community services to insure the lowest cost operation and easiest access by consumers. The example used will be an analysis of optimum location of rural fire trucks.

Optimum location needs—emergency medical service [ ].

Voters in Latimer County, Oklahoma approved a resolution to form an emergency medical service district along county lines, and to access the maximum 3 mill levy. The county is located in the southeastern part of Oklahoma, and had a 1975 population of 9,800. Wilburton, the county seat, is the largest town in the county with approximately 3,000 population in 1975.

With the additional revenue expected from the levy, the policymakers are considering alternative ambulance service organizations and locations. The policy board, county commissioners, and hospital administrators requested both location and budget analysis, so that alternatives could be evaluated.

A general transportation model was used to minimize a linear objective function with respect to specific linear constraints. There are five possible communities (Gowen, Wilburton, Red Oak, Yanush, and Buffalo Valley) in which to locate emergency medical service facilities. It is assumed the same quality of on-site service could be provided from each supply point. The county was delineated into 26 demand areas with township lines serving as boundaries. Mileage data were calculated from the centers of the 26 demand areas to five community locations. Two alternative objective functions were used to evaluate alternative locations. These included:

I. Minimize the maximum response time, and

II. Minimize average response time.

Using the five possible communities in which to locate an ambulance, transportation solutions for optimum location were derived for each objective function determining the placement of one, two, or three ambulances.

Results

Results of these analyses are discussed in two parts. First, the locations selected by the location model are presented along with quality of service variables for each location. For each objective, the first and second choice solutions are presented. First and second choice locations or sets of locations are shown so that policymakers have more information concerning alternatives. Second, the budget analysis showing the cost of operation from the selected locations is presented. This information on first and second choice location(s) allows policymakers to consider the costs of operation, small differences in quality of service, and political feasibility of alternative locations.

Optimum location

Objective I: Location to minimize the maximum response time.—First and second choice locations of one, two or three ambulance facilities are shown in Table 1. Associated with each of these locations is a maximum and average per call distance (Table 2). For example, locating one ambulance in Wilburton and one in Yanush would result in a maximum distance to be traveled of 24 miles to reach the furthest emergency. The average distance per emergency with these locations would be 8.3 miles. The mileage figures can be considered as a quality of service indicator. Assuming an ambulance travels at 60 miles per hour, the maximum response time for these locations is 24 minutes. Depending on local conditions, other ambulance speeds may be used to convert miles to minutes.

TABLE 1.—OPTIMUM LOCATIONS FOR VARIOUS NUMBER OF AMBULANCE FACILITIES UNDER ALTERNATIVE OBJECTIVE FUNCTIONS

Objective and number of locations	Choices	
	First	Second
I. Minimize the maximum response time:		
a. 1 ambulance facility	Wilburton	Buffalo Valley.
b. 2 ambulance facilities	Wilburton and Yanush	Buffalo Valley and Wilburton.
c. 3 ambulance facilities	Red Oak, Wilburton, and Yanush	Buffalo Valley, Red Oak, and Wilburton.
II. Minimum average response time:		
a. 1 ambulance facility	Wilburton	Red Oak.
b. 2 ambulance facilities	Buffalo Valley and Wilburton	Wilburton and Yanush.
c. 3 ambulance facilities	Buffalo Valley, Red Oak, and Wilburton.	Red Oak, Wilburton and Yanush.

TABLE 2.—RESPONSE TIME IN MILES FOR VARIOUS NUMBER OF AMBULANCE FACILITIES UNDER ALTERNATIVE OBJECTIVE FUNCTIONS

Objective and number of locations	Choices			
	First		Second	
	Maximum distance	Average distance	Maximum distance	Average distance
I. Minimize the maximum response time:				
a. 1 ambulance facility	30.0	11.0	39.0	23.8
b. 2 ambulance facilities	24.0	8.3	25.5	8.0
c. 3 ambulance facilities	20.5	6.2	25.5	6.0
II. Minimize average response time:				
a. 1 ambulance facility	30.0	11.0	45.0	18.2
b. 2 ambulance facilities	25.5	8.0	24.0	8.3
c. 3 ambulance facilities	25.5	6.0	20.5	6.2

Among first choice locations, the effect of one, two or three locations on response time is to decrease maximum response time. Maximum response time decreases by 6 minutes when the number of ambulance locations is increased from one to two. A decrease of 3.5 minutes in response time is obtained if three ambulance locations are provided.

Objective II: Location to minimize average response time.—For one ambulance location, the first choice is again Wilburton, whereas the second choice is Red Oak. For two locations, the first choice is Wilburton and Buffalo Valley, while for three locations the first choice is Buffalo Valley, Red Oak, and Wilburton. Average response decreases from 11 minutes to 8 minutes as the second vehicle is added, and decreases further to 6 minutes as the third vehicle is added.

Annual costs of operation

Capital costs are affected by the number of ambulances and type of ambulance facility. Operating costs are influenced by the number of calls, distance traveled, and labor arrangements. Thus, each location or combination of locations will have a different cost of operation. To give the policymakers in Latimer County additional information, annual budgets were estimated for each of the first and second choice sites selected by the location model (table 3). In addition, a budget for two ambulances operating out of Wilburton is presented.

Very little difference in costs is witnessed between the first and second choice when two or three locations are considered. However, decisionmakers can readily assess the cost of adding an additional facility. For example, yearly costs for one ambulance at Wilburton would be $43,038 whereas yearly costs would increase to $50,299 if ambulances are located at Wilburton and Buffalo Valley.

Policymakers can now compare alternatives with respect to both the quality and cost of service with different number of facilities and locations. If only one ambulance facility and a minimization of maximum response is desired, then Wilburton should be selected as the appropriate site. Maximum response time would be 30 minutes, and annual cost of operation would be $43,038. Any other choice could result in a longer response time and higher cost of operation with the same system. If two locations are desired, then the Wilburton and Yanush locations would minimize the maximum response time, and cost $50,387 to operate annually. The first choice locations to minimize average response time is Buffalo Valley and Wilburton, at an annual cost of $50,299. Thus, costs of operation are almost the same under either objective and location. However, operating two facilities costs approximately $7,000 more a year than one facility. Quality of service is increased since maximum distance is decreased by about 5 miles, and average mileage to an emergency decreases about 3 miles.

TABLE 3.—ESTIMATED ANNUAL BUDGETS FOR OPERATION OF 1, 2 OR 3 AMBULANCES—1977

Item	1 ambulance			2 ambulances			3 ambulances	
	Wilburton	Buffalo Valley	Red Oak	Wilburton and Yanush	Wilburton and Buffalo Valley	Wilburton	Red Oak, Wilburton and Yanush	Buffalo Valley, Red Oak, and Wilburton
Capital costs:								
Vehicle	$5, 480	$8, 523	$6, 754	$6, 844	$6, 711	$7, 815	$8, 168	$8, 154
Communications	165	165	165	330	330	330	495	494
Pagers	0	0	0	200	200	200	400	400
Building	3, 547	3, 547	3, 547	3, 547	3, 547	3, 547	3, 547	3, 547
Interest	1, 400	1, 400	1, 400	2, 880	2, 880	2, 880	4, 360	4, 360
Subtotal	10, 592	13, 635	11, 866	13, 801	13, 668	14, 772	16, 970	16, 956
Operating costs:								
Gas	1, 458	2, 267	1, 798	1, 432	1, 464	1, 458	1, 424	1, 453
Vehicle maintenance [1]	605	943	750	593	606	605	591	608
Base communications	252	252	252	252	252	252	252	252
Medical supplies	449	449	449	449	449	449	449	449
Building maintenance	900	900	900	1, 350	1, 350	900	1, 800	1, 800
Service contract	78	78	78	156	156	156	234	234
Labor	28, 704	28, 704	28, 704	32, 354	32, 354	32, 354	36, 004	36, 004
Subtotal	32, 446	33, 593	32, 931	36, 586	36, 580	36, 174	40, 755	40, 801
Total	43, 038	47, 228	44, 797	50, 387	50, 299	50, 946	57, 724	57, 756

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[1] Vehicle maintenance charge includes costs of oil changes, lubrication, and other maintenance items.

Optimum location—other problems

The need for optimum location analysis arose in several other areas. One problem which decisionmakers of one county presented the team was the location of rural fire trucks in organizing a fire district. In this case, decisionmakers needed answers as to how many locations were needed, where should these fire trucks be located, and the costs and quality estimates under alternative locations. A second location problem which arose was regarding optimum rural law enforcement patrolling. Here again, a general transportation model can be used to derive optimum patrolling patterns. These patrolling patterns differ, depending upon the objectives used, such as frequency of checking on certain locations, minimum patrolling mileage, or maximum protection of property values. A third location problem which confronted the team related to health services. With the emphasis on regional health planning, an analysis of this sort is being used to determine where health care services should be added or expanded.

SUMMARY

If community development researchers are going to conduct economic analysis useful to local decisionmakers, we must constantly interact with them, as well as policy makers and serve providers. This paper summarizes experiences of the Great Plains project research team, which did interact with local decisionmakers. Our experiences indicate that the economic analysis which local decisionmakers most frequently request falls into three categories: (1) impact or projection analysis, (2) community service budget analysis, and (3) optimum location of community service facilities

Impact analysis requests occur when there are sudden changes in the economic base of the community and leaders desire to plan for these changes. Projection analysis requests often are needed as decisionmakers plan the necessary capacity in making capital outlays for community services. The largest number of requests received were for budget analysis for various community services. Decisionmakers were faced with how to provide the service and remain within their budget. Thus, they needed information on returns, capital and operating costs, and a measure of equality of all possible alternatives. From this, they are better informed to make a decision. The third category of economic analysis requested was optimum location analysis. Using the budget data, alternatives could be specified and costs and quality data given for alternative locations.

In conclusion, if we are to conduct economic analysis useful to decisionmakers, we must (1) interact with them, (2) conduct simple budget studies, and (3) present the data in a form which local decisionmakers can use themselves. Our experience indicates that simple forms will serve that purpose. Another means of information dissemination, such as a remote computer terminal used by extension personnel, might be extremely useful. By feeding in local conditions, the costs of alternative delivery systems could be calculated quickly and local alternatives evaluated much more rapidly.

LESSONS LEARNED

The experiences learned from the Great Plains project are that if researchers and extension personnel are going to do useful work, several steps must be taken. First, we need the opinions of those affected by various programs. If we are to measure the impact of programs on quality of life of rural people, we need their interpretation and evaluation. The second step involves continuing and increasing our interaction with policy makers. The range of policy makers goes from town councilmen to the Office of the President. If our research results are to continue to be relevant or to be made more relevant, we need to involve policy makers. We need their assistance in defining the problem, specifying objectives, and reviewing results. If policy makers cannot use our results, we need to reevaluate our efforts. A third step is to interact with providers of services which affect quality of life. For example, to have a real insight into rural health problems, the health researcher and extension person must interact with providers of rural health services as well as users.

Our experiences during the Great Plains project were with local decisionmakers. It was clear to us that their research and extension needs were for (1) impact, (2) budget, and (3) location studies. In addition, we found it was very important that the data and results be presented in a form which local decisionmakers could use themselves. Our experience indicates that simple forms containing a procedure can serve that purpose.

Researchers' rewards for this type of applied research may not come from scholarly journal publications, but more likely from seeing study results used even before they are published. We observed important decisions made the same evening that we presented research results. Furthermore, calls for assistance, requests for publications, and reports of local decisionmakers using our publications continue to come in daily. This call for the research results illustrates local decisionmakers need for the results and is also very rewarding to the research team knowing that our research is being used. In addition, the research team has received complimentary letters for our research efforts in the Great Plains. Several examples are cited. A letter from the Mayor of Wynoka, Oklahoma and Wynoka Hospital Board states:

"The announcement on the funding of the Health Center Project came as quite a boost to our community. The community is very pleased in knowing that so many people are concerned about our future health care needs.

"As you well know, this will insure our future health care needs, and play a major role in the economic stability of our area.

"We are very grateful for all your efforts and assistance in working on this project."

Another letter written to Dr. Hady from Dr. Frank Baker, Dean of Division of Agriculture, Oklahoma State University states:

"The research led by Dr. Doeksen in rural service needs and costs is excellent work and is being widely used in this region. We appreciate the leadership that Dr. Doeksen is giving to this area of research and the opportunity for our Extension and Agricultural Experiment Station staff to work with him."

Finally, a letter received from Oklahoma Governor David Boren states:

"I would like to express my earnest appreciation for the assistance which you and representatives of Oklahoma State University have afforded this office, the people of the State of Oklahoma and especially the community of Enid.

"It is my understanding that upon receiving our request for help, you immediately proceeded to lend your highly professional talents and services to the community leaders in the Enid area. I have been called by several of those leaders who were extremely impressed with your responsiveness and degree of knowledge in areas that were foreign to them."

The point I wish to convey from these statements is that this type of applied research and extension help in making decisions, and if we provide it, they are better informed in making their decisions. In addition, the project team has found our research handbooks being used without professional assistance, thus it appears they are in a form such that local decisionmakers can readily use. Finally, professionals in other U.S. regions are beginning to adopt the methodology and preparing similar handbooks that their clientele can use in their region.

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STATEMENT OF PETER H. GORE, PH. D., ASSOCIATE PROFESSOR OF ENVIRONMENTAL SCIENCE, STATE UNIVERSITY COLLEGE AT PLATTSBURGH, N.Y., AND ADJUNCT ASSISTANT PROFESSOR OF RURAL SOCIOLOGY, CORNELL UNIVERSITY, ITHACA, N.Y.

TITLE V RURAL DEVELOPMENT

Title V of the Rural Development Act of 1972 was instituted to promote new types of rural development research and extension activities to improve the quality of life in rural areas. Title V activities in different states have taken various forms, although in most cases some new, heretofore untried techniques were experimented with. Such is the case in New York State where a substantial portion of the Title V monies were devoted to research and extension activities in one pilot county, Clinton. As one of the poorest and most rural counties in the state, Clinton County has severe difficulties with access to services, public and commercial, as well as many problems with health, employment, housing, etc. The research I am reporting on was to develop new techniques of assessing access to services in rural areas and how to present the findings to local decision-makers in the most comprehensible fashion.

SERVICE ACCESS PROJECT

The result of the Access to Services Project was the development of a geography based visual overlay method to present a number of types of data to local audiences, whether they were agency personnel charged with providing programs or local supervisors whose public responsibility is to provide "good things" for local residents. The method was used to present and interpret data from the following sources:

a. Census materials,
b. Agency program location,
c. Location of primary services,
d. Key informant survey information on where people go for services,
e. General sampler survey on what services were needed where.

CONCLUSIONS

Major service access difficulties were identified in health, employment, transportation, and access to information e.g. toll-free calls from the rural areas to the city where most services were located. Subsequent Rural Development projects are working on these specific applied problems.

ADVANTAGES OF THE METHOD

This technique of assessing access to services in rural areas is extremely low cost; no high-level professional expertise is needed and most of the work can be done by local volunteer citizens. A fringe benefit to this mode of operation is that when local people become involved in studying their community they usually become more interested in searching for solutions to problems that are turned up.

RECOMMENDATIONS

The Extension Service and other agencies charged with promoting development and provision of a better quality of life, especially to rural persons, should have ready access to easy to interpret and up-to-date reliable information on their immediate service area. Such information serves not only to identify specific needs, but also to enable agencies to plan and target programs more effectively and finally, can provide a data base from which to write new proposals for further grant funding.

EPILOGUE

Better understanding of the needs and resources of all communities by local persons can lead to a greater sense of self direction and less dependence on outside help. As taxes rise everywhere, and services are still lacking, a way for local citizens to make the best uses of their own resources may provide a way for quality of life to be improved in rural areas without continually depending upon dwindling outside resources.

[Supplemental material submitted by Dr. Gore:]

State University of New York,
College at Plattsburgh,
Chazy, N.Y., May 8, 1978.

MEMORANDUM

To: Sen. Patrick J. Leahy.
From: Peter H. Gore.
Re: Further responses to questions raised at the Hearing on Rural Development Research, Friday, May 5, 1978.

I would like to respond more fully to the questions you raised about preparation and use of the overlay materials during the hearing.

1. Problems of construction of the materials?

At least ⅔ of the data needed for making the overlays is readily available in tabular form. With some instruction, almost anyone can draw the basic maps and symbols. The Thermofax transparencies cost 35¢ apiece. When data needs to be collected locally, volunteer citizens can often accomplish the task. This is both low cost and effective politically because it involves local people looking at local problems.

2. How do rural audiences respond to the materials?

In general they are enthusiastic about seeing data relating to their well-being presented in an easily understood manner. They also delight in adding to the data when some local service has been inadvertently left off the charts!

3. Can this material be published to further your own academic and professional career?

In terms of strictly local data, no; but the *idea* of juxtaposing variables on a geographic base is, and I expect to put together the comparative results of several counties into a "scholarly" article.

4. Is this considered research?

This depends on one's definition of research. I do consider it to be applied action research in the best traditions of Rural Sociology. Particularly, if it can help to solve local county or community problems, it is a valid area of study and should be considered and rewarded as highly as more esoteric areas of investigation.

5. Do any other counties have this information?

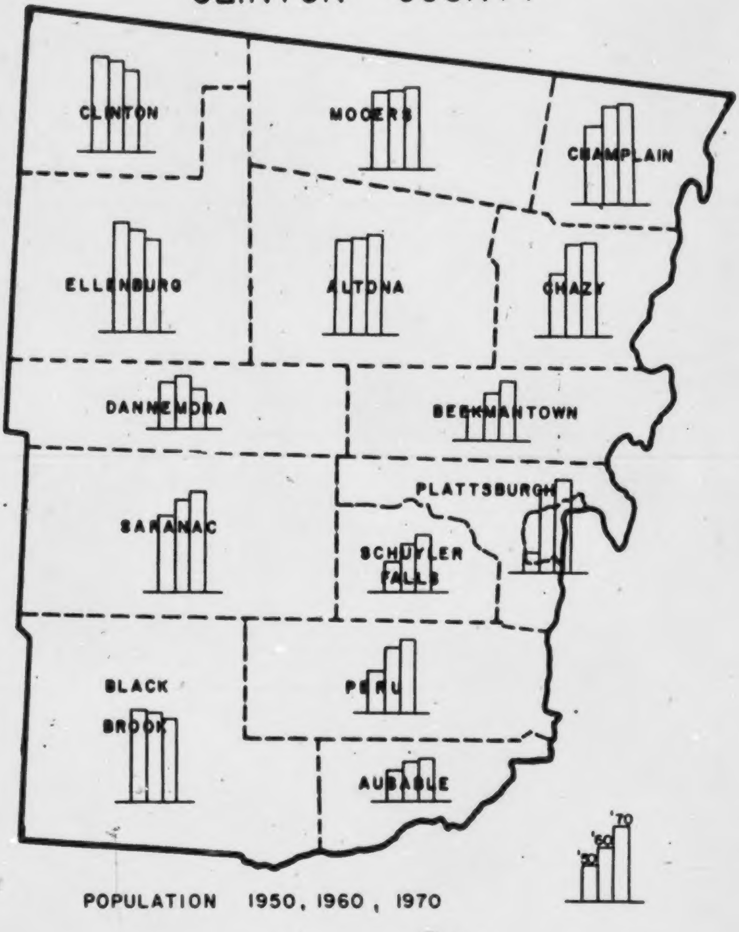
The complete materials have been prepared for two additional counties and selected variables have been produced in overlay form for all 57 counties in New York state outside New York City. How-to-do-it instructions are available for anyone wishing to prepare materials of his own.

I think that answers to the rest of the questions raised by your staff were thoroughly aired at the hearing. I would also like to take this opportunity to thank you for undertaking the very important process of conducting hearings on the long neglected area of rural development research and, more broadly, the need for a comprehensive national Rural Policy. It is long overdue.

[The following tables and charts were submitted by Dr. Gore. See p. 78 for reference:]

	Population			
	1950	1960	1970	Ranking
Altona	1,711	1,750	1,852	11
Ausable	1,903	2,605	2,652	9
Beekmantown	1,690	2,538	3,189	6
Black Brook	1,611	1,595	1,484	13
Champlain	5,118	5,544	5,633	2
Chazy	2,741	3,386	3,393	5
Clinton	844	796	712	14
Dannemora	5,614	6,141	4,719	3
Ellenburg	2,098	1,945	1,775	12
Mooers	2,509	2,587	2,606	10
Peru	2,348	3,848	4,312	4
Plattsburgh	3,713	14,515	15,881	1
Saranac	2,399	2,881	3,127	7
Schuyler Falls	1,585	2,419	2,884	8

CLINTON COUNTY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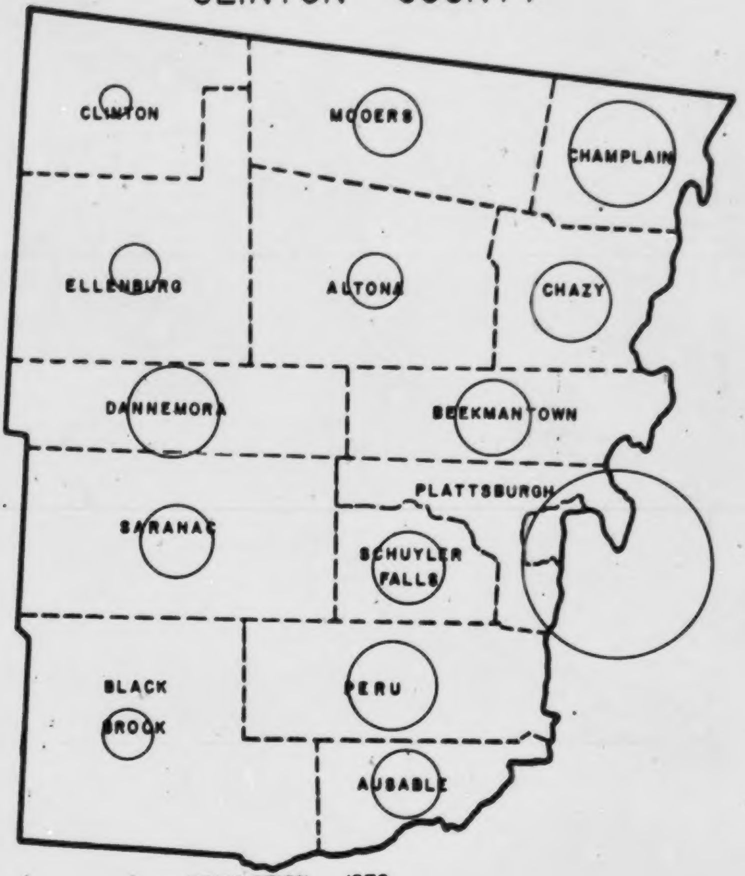
SCHUYLER FALLS
BLACK BROOK
PERU
AUSABLE
'50
'60
'70

POPULATION 1950, 1960, 1970

POPULATION STATISTICS

	Population 1970	Percent under 15	Percent over 65	Work force	Percent unemployed
Altona	1, 852	39	10	513	8
Ausable	2, 652	36	9	987	13
Beekmantown	3, 189	37	7	1, 095	5
Black Brook	1, 484	32	10	427	9
Champlain	5, 633	32	11	1, 996	6
Chazy	3, 393	35	9	1, 255	6
Clinton	712	32	10	184	0
Dannemora	4, 719	16	5	899	3
Ellenburg	1, 775	33	10	613	8
Mooers	2, 606	36	9	881	4
Peru	4, 312	36	7	1, 559	10
Plattsburgh	15, 881	37	3	3, 697	9
Saranac	3, 127	36	7	991	9
Schuyler Falls	2, 884	37	7	1, 068	11

CLINTON COUNTY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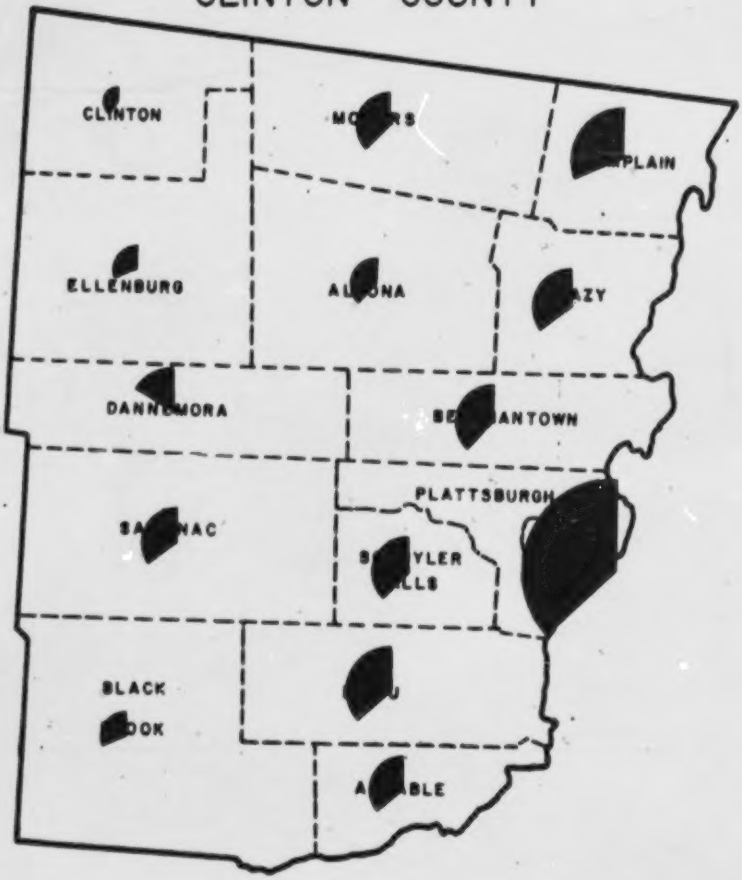
POPULATION 1970

CLINTON COUNTY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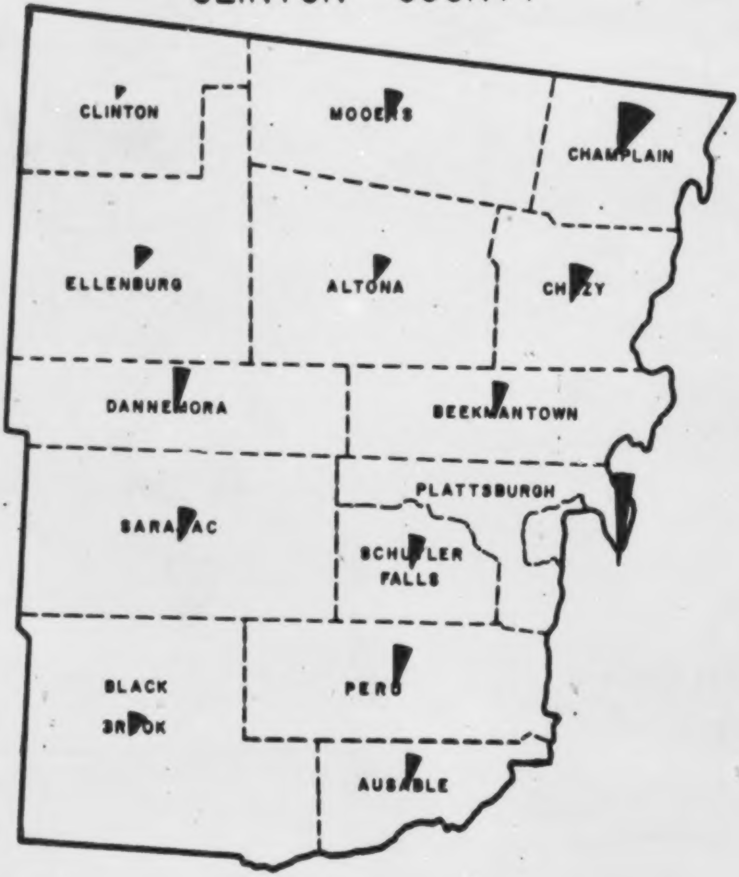
AUSABLE

PERCENT UNDER 15 YEARS

CLINTON COUNTY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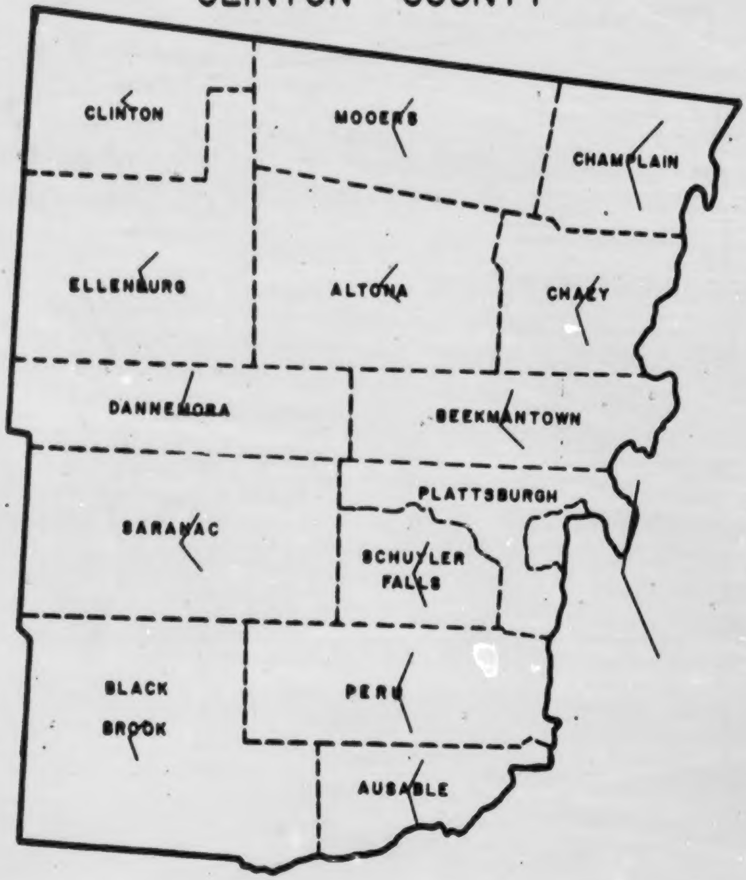
PERU
AUSABLE

PERCENT OVER 65 YEARS

CLINTON COUNTY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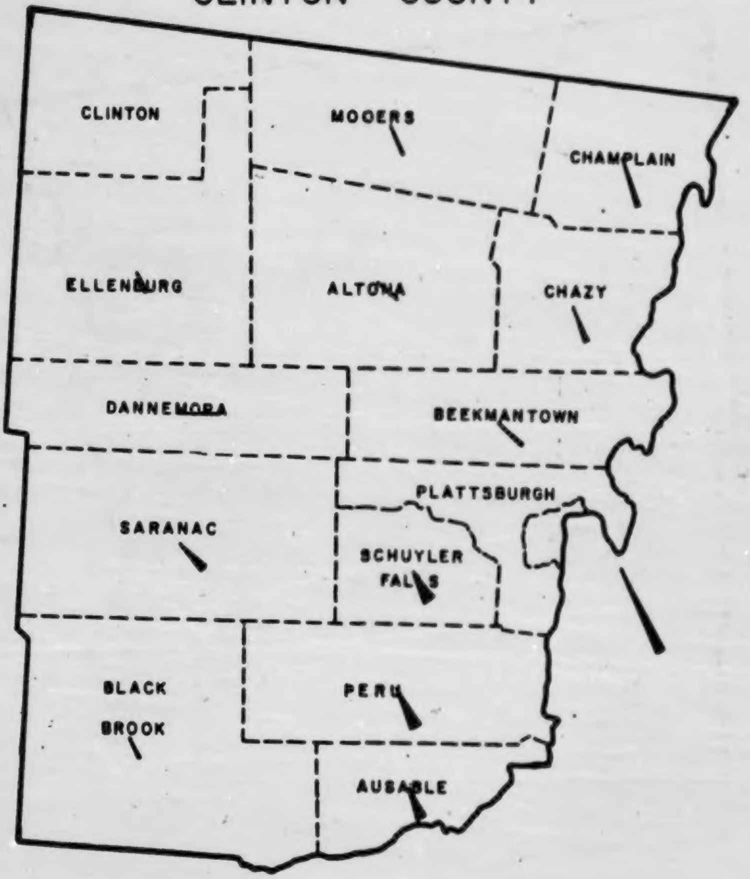
AUSABLE

WORK FORCE

CLINTON COUNTY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PLATTSBURGH
SARANAC
SCHUYLER FALLS
BLACK BROOK
PERU
AUSABLE

PERCENT UNEMPLOYED

TELEPHONE COMPANIES

	Champlain (percent)	Chazy Westport (percent)	New York Telephone (percent)	Ausable Valley (percent)	Toll charge to Plattsburgh (cents)
Altona	70		30		41
Ausable			40	60	41
Beekmantown	10	20	70		(1)
Black Brook			45	55	41
Champlain	100				41
Chazy		100			25
Clinton			100		56
Dannemora			100		25
Ellenburg			100		41
Mooers	100				41
Peru			100		(1)
Plattsburgh			100		(1)
Saranac			100		33
Schuyler Falls			100		(1)

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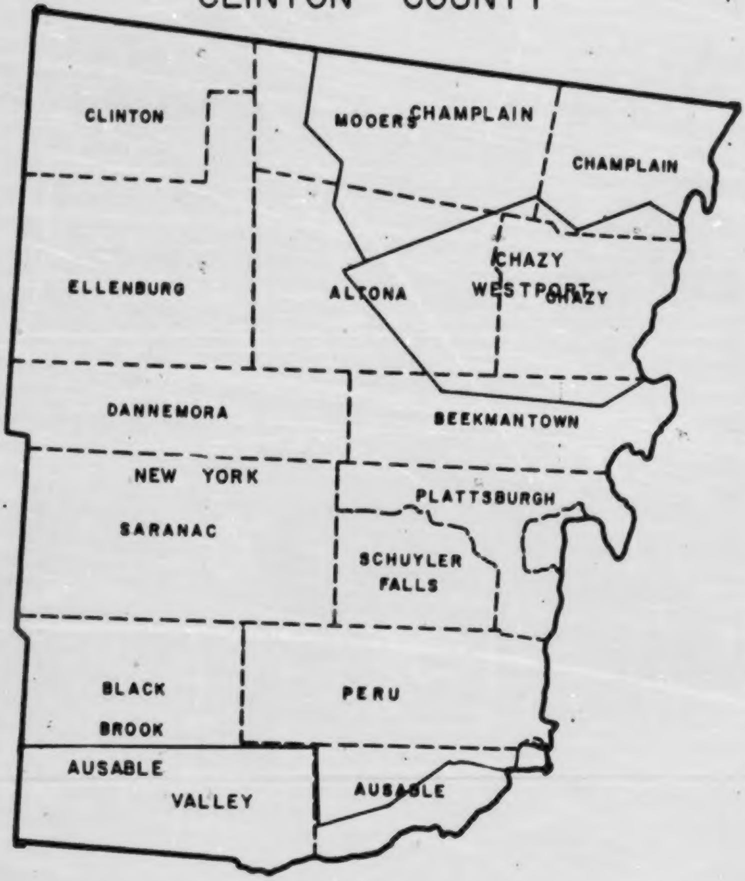
[1] Local.

CLINTON COUNTY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WESTPORT
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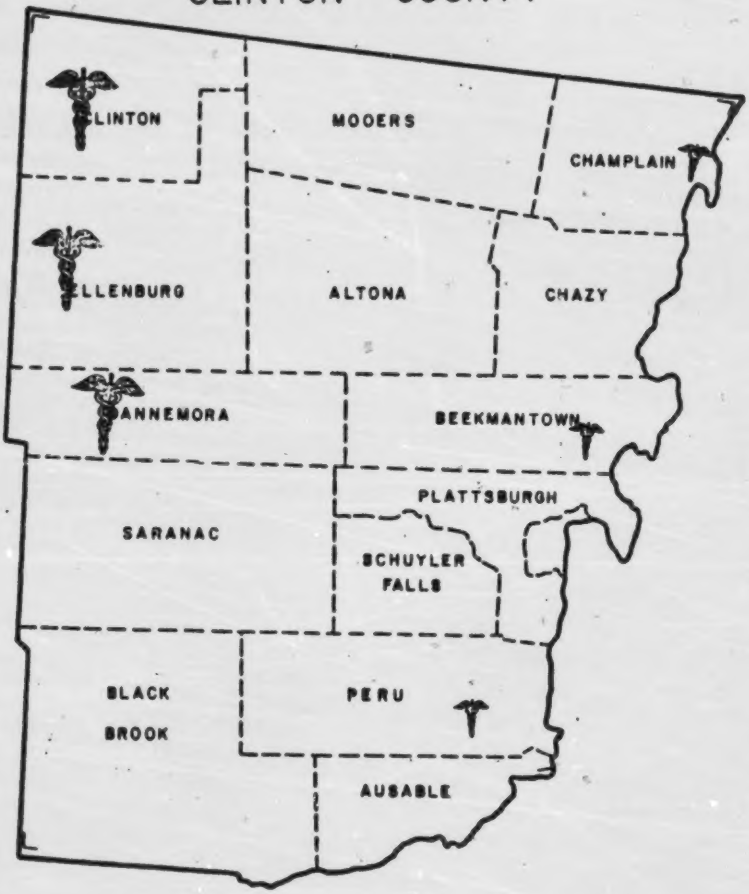
DANNEMORA
BEEKMANTOWN
NEW YORK
SARANAC
PLATTSBURGH
SCHUYLER FALLS
BLACK BROOK
PERU
AUSABLE VALLEY
AUSABLE

TELEPHONE COMPANIES

Listing of medical facility priorities for Clinton County

Town	*Priority*
Beekmantown	3
Champlain	3
Clinton	1
Dannemora	1
Ellenburg	1
Peru	3

CLINTON COUNTY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ALTONA
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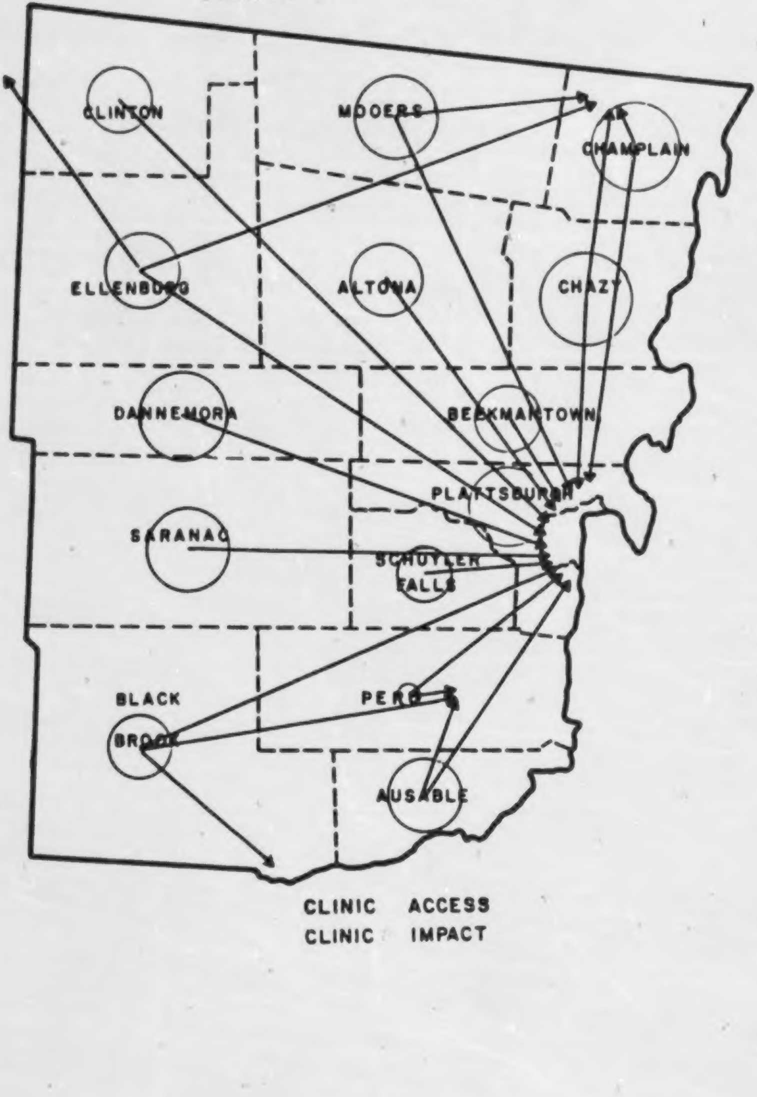
DANNEMORA
BEEKMANTOWN
PLATTSBURGH
SARANAC
SCHUYLER FALLS
BLACK BROOK
PERU
AUSABLE

MEDICAL FACILITIES

CLINIC/OUTPATIENT

Town	Total households	Percent going to—	Approximate mileage	Impact factor	Impact total for town
Altona	489	100 percent Plattsburgh	21.0	102.69	102.69
Ausable	673	33 percent Peru	15.2	33.74	
		67 percent Plattsburgh	17.5	78.93	112.67
Beekmantown	979	100 percent Plattsburgh	10.0	97.90	97.90
Black Brook	568	40 percent Plattsburgh	26.0	59.02	
		20 percent Ausable Forks	4.0	4.52	
		40 percent Peru	10.0	22.70	86.24
Champlain	1,972	75 percent Champlain	4.1	60.64	
		25 percent Plattsburgh	23.2	114.38	175.02
Chazy	1,180	75 percent Plattsburgh	16.8	148.68	
		25 percent Champlain	12.0	35.40	184.08
Clinton	251	100 percent Plattsburgh	33.0	82.83	82.83
Dannemora	890	do	19.5	173.55	173.55
Ellenburg	565	14 percent Plattsburgh	27.0	21.33	
		14 percent Chateaugay	19.0	15.01	
		72 percent Champlain	19.0	77.33	113.67
Mooers	749	75 percent Champlain	15.4	86.54	
		25 percent Plattsburgh	29.5	55.17	141.71
Peru	1,248	100 percent Peru			
Plattsburgh	1,667	100 percent Plattsburgh	6.6	110.02	110.02
Saranac	755	do	18.7	141.19	141.19
Schuyler Falls	779	do	6.6	51.41	51.41

CLINTON COUNTY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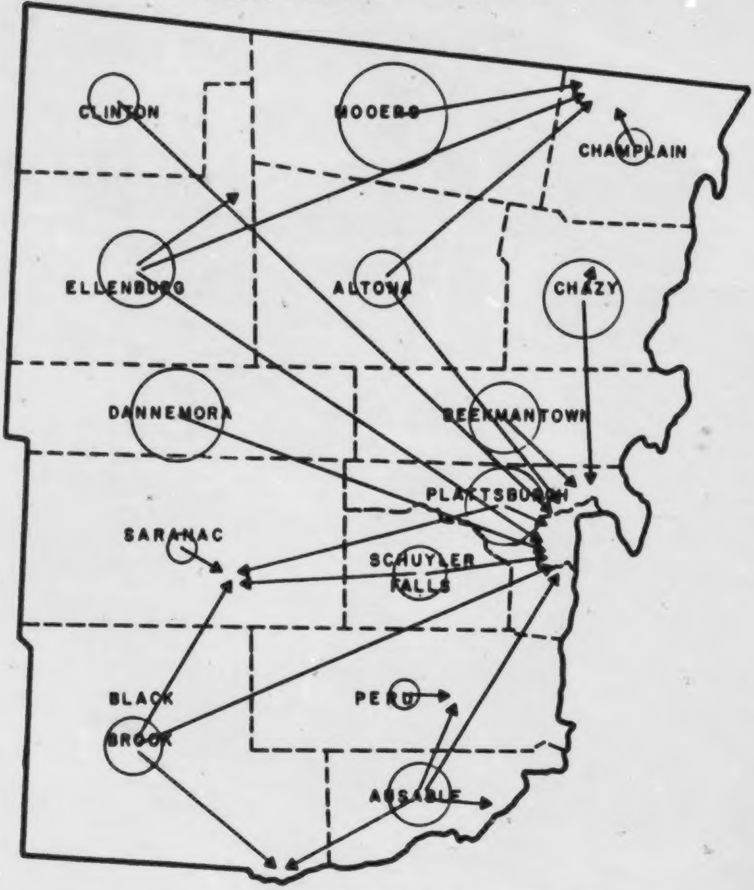
DANNEMORA
BEEKMANTOWN
PLATTSBURGH
SARANAC
SCHUYLER FALLS
BLACK BROOK
PERU
AUSABLE

CLINIC ACCESS
CLINIC IMPACT

DOCTOR/PHYSICIAN

Town	Total households	Percent going to—	Approximate mileage	Impact factor	Impact total for town
Altona	489	50 percent Plattsburgh	21.0	51.24	
		50 percent Champlain	12.7	31.00	82.24
Ausable	673	33 percent Peru	15.2	33.74	
		17 percent Plattsburgh	17.5	19.95	
		33 percent Keeseville	4.9	11.22	
		17 percent Ausable Forks	15.2	17.33	82.24
Beekmantown	979	100 percent Plattsburgh	10.0	97.90	97.90
Black Brook	568	60 percent Ausable Forks	4.0	13.64	
		20 percent Saranac	14.9	17.00	
		20 percent Plattsburgh	26.0	29.64	60.28
Champlain	1,972	100 percent Champlain	4.1		
Chazy	1,180	60 percent Chazy	6.5	46.02	
		40 percent Plattsburgh	16.8	79.30	125.32
Clinton	251	100 percent Plattsburgh	33.0	82.83	82.83
Dannemora	890	do	19.5	173.55	173.55
Ellenburg	565	14 percent Champlain	19.0	15.01	
		29 percent Ellenburg Depot	4.0	6.56	
		57 percent Plattsburgh	27.0	86.94	108.51
Mooers	749	100 percent Champlain	29.5	220.96	220.96
Peru	1,248	100 percent Peru			
Plattsburgh	1,667	67 percent Plattsburgh	6.6	73.72	
		33 percent Saranac	8.0	44.00	117.72
Saranac	755	100 percent Saranac	4.0		
Schuyler Falls	779	67 percent Plattsburgh	6.6	34.45	
		33 percent Saranac	8.3	21.33	55.78

CLINTON COUNTY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SCHUYLER FALLS
BLACK BROOK
PERU
AUSABLE

DOCTOR ACCESS
DOCTOR IMPACT

Statement of Barton D. Russell, Executive Director, National Association of Towns and Townships

INTRODUCTION

Chairman Leahy and members of the subcommittee, my name is Bart Russell and I am the executive director of the National Association of Towns and Townships, as well as a cochairman of the Small Communities Committee of the Congressional Rural Caucus.

NATaT is a federation of state organizations which provides representation for, and assistance to, public officials from over 13,000 predominantly small communities around the country. The National Association is unique among public interest groups in that it is the only local government organization whose primary focus is directed toward the institutional problems of small towns and rural areas. The major concentration of our national support center during the past has been on the federal system and the effects of its actions (or inaction) upon the people who reside in what the feds often refer to as "small town America."

Before I begin, I would like to thank Chairman Leahy, his colleagues and the staff both for conducting these hearings, which in my opinion represent a pioneering effort, and also for inviting me to present the views of the National Association on this extremely important topic.

INTERGOVERNMENTAL RELATIONS: SMALL COMMUNITIES AND THE WHITE HOUSE

Soon after the president's new administration got underway in 1977, I and members of NATaT's board of directors arranged a meeting with representatives of the White House Office of Intergovernmental Relations, which is directed by Jack Watson. We sought the meeting with these officials to express our concern about the domination of the intergovernmental policymaking process in Washington by the big cities. Also, since Mr. Carter himself was from a small town, we wanted to know his plans for improving the status of rural communities at the federal level. The response to our inquiry was, to say the least, very disappointing. NATaT representatives were told that although there was sensitivity within the Office of Intergovernmental Relations to the problems of small town officials in terms of federal programs, there was little information available about the problems. We were advised to develop recommendations about the role of small communities in the federal system and a "laundry list" of problems or barriers which they faced. Needless to say, their request was no small order and in fact represented an impossible task for our organization to undertake. It did, however, serve to underscore the fact that the needs and concerns of small towns and rural areas are not being considered in more than a superficial way by the White House intergovernmental policymakers. Without adequate information about the nature of rural communities and the way in which they interface with federal programs and agencies, the White House could not be expected to develop rational domestic policy proposals. Yet, despite this obvious deficiency, those White House advisors did not seem concerned. They did not suggest resolutions for solving this internal problem and have not, since that time, taken action to remedy the situation.

USDA: A SOURCE OF RURAL DEVELOPMENT IDEAS AND ADVICE—THEORETICALLY

One of the most positive actions taken by the President during his first year in office was the hiring of individuals in the Department of Agriculture at senior-level positions who have previously demonstrated a commitment to the betterment of life in countryside America. Alex Mercure, Gordon Cavanaugh and Bill Nagle are a few such appointments which come to mind. These men and their able and dedicated staffs have given me every indication that they will to the best of their abilities give momentum to Section 603 of the Rural Development Act. And, in fact, I know that Assistant Secretary Mercure testified just two weeks ago before the Senate Subcommittee on Rural Development that he was confident that he and members of his staff were already beginning to carry out some of the objectives of this section. I also noted that, despite his optimism in this regard, he stated:

"There is a lack of comprehensive technical assistance and research and development to adequately assist small communities.

"Most federal programs have not helped state and local governments build their capacity to become full partners in the rural development process.

"There is an inadequate data base and inadequate performance indicator systems on which to base program decisions.

"Most categorical programs are developed around urban-oriented research and development, urban standards, and urban delivery systems; and most of them count on the availability of sophisticated urban-level planning and administrative services."

It is because the Department of Agriculture has not been committed to doing research and developing data about rural communities that small towns and rural areas are considered as an afterthought in the domestic policy and program development process.

URBAN DOMINANCE AT THE FEDERAL LEVEL

During his testimony at the White House Conference on Balanced National Growth and Economic Development, Agriculture Secretary Bergland strongly asserted that the biggest weakness of the federal system is its failure to deliver non-USDA programs to rural areas. The National Association of Towns and Townships wholeheartedly concurs with Secretary Bergland's view in this regard. However, it is our feeling that the Department has been a major contributor to this problem because it has not been and is not now geared up to provide individual departments and agencies within the federal system with information about the special needs and characteristics of small towns and rural areas. The USDA does not have the internal data bank and research capacity to assess the impact of rules and regulations proposed by other federal units, nor, if history is a guide, does it have the inclination to provide such a critical analysis. In short, despite the fact that the Department of Agriculture has traditionally been viewed as the primary entry point by local officials from rural communities, the Department has *not* provided a voice within the Administration for "Small town America". If non-metro localities are ever to receive equity in the national policymaking system, the USDA must stand firm in its commitment to rural development research and capacity building at the local level. Perhaps more importantly, the Department of Agriculture must substantially increase its internal ability to watchdog, in a sense, the actions of other federal agencies to ensure that their programs are beneficial and appropriately scaled for our Country's many thousands of small towns. It must, we submit, move beyond the good intentions we believe it currently has. Otherwise, the big cities, with the backup of their large scale research and development units both within and outside government at the federal and state levels, will continue to have better "tools" to dominate the federal domestic policymaking process.

HUD: TAKING THE LEAD ON BIG CITY RESEARCH—USDA SHOULD TAKE A SIMILAR APPROACH FOR SMALL COMMUNITIES

The U.S. Department of Housing and Urban Development undertakes major research studies, testing and demonstrations related to the Department's mission of promoting the development and general betterment of the big cities and urban areas. HUD has a very effective in-house "think tank" known as the Policy Development and Research Division which, under 1970 legislation, has been conducting research on community development matters and activities designed to increase state and local government capabilities. These functions are carried out both internally and externally, through grants and contracts with non-profit research groups, educational institutions, in addition to agreements with state and local governments and other Federal agencies. In short, this division aggressively seeks to develop and implement better methods for guiding economic and community growth and for increasing productivity in the public service delivery system of urban governments. It should be noted that it has a very significant budget with which to undertake these activities.

HUD has been very creative in its approach to this area of intergovernmental studies. One project which the Department funded, for example, involves a contract with the U.S. Conference of Mayors for the purpose of establishing an urban observatory program. Under this program, HUD awarded the Conference of Mayors $250,000 a year for three years to select 10 cities for the purpose of coordinating the efforts of local government and local universities in the development of research activities. This is just one of many projects of this nature which are funded in numerous divisions within HUD. The results of the research and demonstration projects have served as the basis for recommendations by the Department to the President on urban policy matters. Clearly the Secretary of Agriculture has not had, and still does not have, such resources. Consequently, our small towns and rural areas, as stated previously, do not receive adequate federal attention and support. We believe USDA, in order to have a real impact in rural communities, should take a similar comprehensive approach to the development of a major R&D program.

LOCAL OFFICIALS: A MISSING ELEMENT IN POLICYMAKING AT THE DEPARTMENT OF AGRICULTURE

Rural citizens typically receive the majority of their public services from small government units often managed by part-time elected officials. Despite the fact that these local officials operate without elaborate and sophisticated Bureaucracies and staffs, they have been and continue to be the primary policymaking and administrative units at the local level responsible for the delivery of local services such as planning, police and fire protection, roads and bridges, sewer and water facilities and other basic and essential operations. If it is assumed that local officials in small towns and rural areas are a necessary ingredient to the success of community development efforts in nonmetropolitan locales, then ways and means *must* be found to strengthen their capabilities to participate in the intergovernmental system. To date, the central office of the Department of Agriculture has not made a significant effort to identify the role of local officials in the mission of any of its subordinate agencies. NATaT believes that USDA, like most other major federal agencies, should establish an Office of Intergovernmental Relations to provide local public officials the opportunity to express their interests and concerns about programs which are intergovernmental in nature and to legitimize the local government process in small towns and rural areas.

Last year our National Association, among other organizations, was called upon to review the research activities of what was then called the Economic Research Service's local government program. While the ERS is to be commended for taking the lead in inviting such outside groups in for this preview process, it was discouraging to discover that the Service's research agenda had not been developed after consultation with groups such as NATaT. Consequently, its projects bore little resemblance to what local officials from small towns would have chosen as priority topics. To make matters worse, most of the research being undertaken by ERS was long-term in nature and the agency did not seem amenable to changing its agenda mid-stream. The new ERCS has the potential for filling a basic research void in the rural development policy process, but without prior and ongoing input from local officials, it can never hope to solve the real-world, institutional problems of small communities. We look for direction from Secretary Bergland to move the service toward fulfilling its potential.

SOME POSITIVE ACTIVITIES—HOPE FOR A MUCH BRIGHTER FUTURE

The National Association of Towns and Townships has been some activities of USDA and its divisions which could, if they were properly increased and coordinated in the future, have a real and positive impact, ultimately, at the local level. For example, in 1977 the Department's Economic Research Service and the North Central and Northeast Regional Centers for Rural Development sponsored a major national conference on non-metropolitan Community Services Research. It was the first event of its kind ever held in this Country and those responsible for organizing the conference are to be commended for this effort. NATaT's major concern, once again, is that it did not appear to involve local officials in the pre-conference planning process and, more importantly, it does not now seem likely that the conference will become a regular USDA-sponsored activity. We believe it should.

NATaT is also aware of certain activities of our land grant colleges and the Cooperative Extension Service which have been of assistance to rural local governments. For example, one of our members, the Pennsylvania State Association of Township Supervisors, was the recipient of support by USDA through Penn State University. In 1976 the Cooperative Extension Service undertook a survey of township leaders to determine the problems they were experiencing as part-time elected officials responsible for managing growth and change and delivering public services in rural communities. Such assistance is of real significance and similar efforts would be quite beneficial to small towns around the country if they were conducted on more than a limited and piece-meal basis. Unfortunately at this time they are not.

Another positive effort undertaken by USDA was initiated last year as a joint venture with the Department of Housing and Urban Development. This pilot project was designed to identify ways in which community development programs could be delivered to people in remote rural areas. While the study was done in a cooperative spirit between two departments which are not known for working well together (and therefore must be considered a fruitful activity), it was really a very modest effort which will not, we believe, have a substantial impact on the rural development process.

CONCLUSION

The National Association believes that the U.S. Department of Agriculture has, under this administration, both the intent and the personnel to implement Section 603 of the Rural Development Act of 1972. This effort will require coordination and cooperation throughout the federal system and it is for this reason that NATaT supports the concepts embodied in the Rural Development Policy Act which has been introduced by Congressman Nolan in the House. This legislation would, among other things, create the opportunity for rural community input through an advisory committee of local officials from small townships and rural areas. We would also certainly support the introduction of a similar measure in the Senate.

Interdepartmental coordination and cooperation will not make much difference, however, unless the Department of Agriculture takes the lead in initiating rural development activities across agency lines at the federal level. This, we believe, cannot occur until the Department of Agriculture centralizes and increases substantially its small town and rural area research activities. With internal support of this nature and scope, the USDA could, for the first time, become a real factor in our national domestic policymaking process. NATaT looks forward to the day when this concept is made a reality. Thank you.

University of Wisconsin–Extension,
Madison, Wis., May 5, 1978.

Hon. Patrick J. Leahy,
U.S. Senate,
Committee on Agriculture, Nutrition, and Forestry,
Washington, D.C.

Dear Senator Leahy: I am sorry I was not able to respond earlier to your letter received by my office two weeks ago regarding the hearings by your Committee on March 4 and 5.

I am very interested in, and have allocated considerable resources from our Wisconsin Cooperative Extension Service budget to, non-farm rural development.

Yes, we do need additional research, but more than that, we need to get rural non-farm communities and people directly and purposefully involved in the needs identification and application of what is already known to those needs.

We already know how to do it! We have already demonstrated how to do it on a limited scale.

Enclosed is a brief paper I presented to Secretary Robert Bergland last September. It was accompanied by several appropriate charts, slides and cassette recordings with community leaders from rural Texas and rural Wisconsin.

I hope the paper will provide some help in recognition of the need to systematically involved local people as the key to make use

(1) of their own talents and local resources, and

(2) of federal and state resources appropriate to their needs and problems.

Too many people feel that rural development is the providing of grants and loans for public facilities, housing, transportation, etc.! Those are only the tools. What is needed is the catalyst—the organizer—the motivator—the designer—the teacher—to help people in their own communities design their own plans with help from experts and then carry them out with the tools or resources at their disposal.

If I can be of any service to their cause, please don't hesitate to request it.

Sincerely,

GALE L. VANDEBERG,
State Director and Assistant Chancellor.

Enclosures—5.

VandeBerg, Gale L.:

1963; Total Resource Development in Wisconsin: A Citizen's Guide to Plans and Action

1963; U. of Wisconsin Extension Service, College of Agriculture, Madison (October).

McCoy, Palmer E. and Eleanor Jones:

1974; The Wisconsin Rural Development Demonstration Project, U. of Wisconsin Extension Service, Madison.

1977; An ECOP Task Force Report on *Rural Development* (Toward Balanced Growth in America).

1977; ECOP Task Force Committee, U. of Wisconsin-Extension (September).

1977; An ECOP Task Force Report on *Smaller Farms Program* ECOP Task Force Committee (September).

1972; Barron County: A Summary of the Overall Economic Development Plan U. of Wisconsin, USDA (June).

AN ECOP TASK FORCE REPORT ON SMALLER FARMS PROGRAM

(Presented by ECOP TASK FORCE COMMITTEE Members: Gale L. VandeBerg, Chairman, State Extension Director, University of Wisconsin-Extension; Dempsey H. Seastrunk, Assistant Director of Extension, Texas A.&M. System, with help from numerous others in preparation of materials and concepts.)

Education and information to family farmers has been a basic thrust of the Cooperative Extension Service since its establishment in 1914 in context with national farm policy and supported by the USDA.

The national policy supporting major agricultural and mechanical research and a nationwide agricultural extension thrust has given America the world's most efficient agriculture.

THE AGRICULTURAL INDUSTRY AS CLIENTELE

Application of the mechanization and production research has resulted in one out of six non-farm jobs in America being in the agricultural sector in such fields as supplies, services, equipment, pesticides, transportation, packaging, grading, inspecting, merchandising, etc. Agricultural research and the Cooperative Extension Service have had to allocate some of their resources to information and education with this large non-farm sector so it might efficiently, safely and effectively serve the farmer as well as the public.

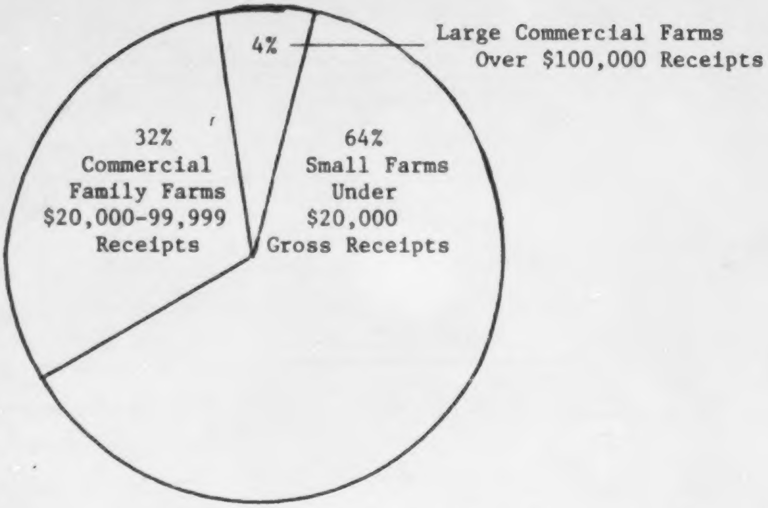
THE FARMERS AS CLIENTELE—THREE BROAD GROUPS

The agricultural revolution has resulted in at least three distinct groupings of farmers, each with quite different needs. Extension must and does work differently with each group.

1. 4% large commercial farms. Gross income over $100,000. This group receives 47% of the nation's gross cash farm receipts. Extension provides technical information.

2. 32% commercial family farms. Gross farm income $20,000–$100,000. This group receives about 43% of the nation's gross cash farm receipts. Extension provides considerable general information through intensive educational experiences in various commodity areas and mass media.

3. 64% of the farms are smaller and generally limited resource family farms. Their gross farm income is less than $20,000 and they receive about 10% of



the nation's gross cash farm receipts. Some 10–15% of these farms can become viable commercial family farm operations.

Generally, this category of smaller farms may be classified into three groups:

a. Young or beginning farmers who can and wish to become viable commercial farm operators, but have limited resources and often lack in skills and knowledge needed to make the transition. This group is relatively easy to work with but requires much more intensive counsel than the established commercial farmers.

b. Farmers who have limited abilities or have physical or health limitations or family situations or age factors which cause them to depend on farming for their livelihood. Within this group, according to 1975 census data, there are 302,000 families (1.3 M. people) whose total income from all sources was below the federal poverty line of $5,500. This group is generally more difficult to reach, must be reached through different methods, requires 1-to-1 counsel on a recurring and relatively sustained basis, and is often outside the mainstream of community programs and quality of living. It is not common for them to do inductive reasoning and learn from or transfer from watching some successful neighbor. This is the group requiring major time and counsel.

c. Part-time farmers where a substantial portion of the family income comes from off-farm work. These are generally people who prefer to live in the country and farm as a supplement to their off-farm employment. They have chosen country living, often with a lack of knowledge and skills needed for farming. They are generally mobile, easy to communicate with through normal media channels, and are frequently quite demanding of Extension and other public agency time and resources.

THE LIMITED RESOURCE FAMILY FARM

It is a. and b. of the three above groups that Extension knows *need* help and Extension has demonstrated it *can* help significantly. However, the heavy demand for educational assistance by commercial farmers, by the agricultural supply and service industries, by the part-time farmers and also by urban residents has created enormous strains on staff time and has resulted, over a period of time, in limiting Extension's capability of serving effectively significant proportions of these enlarging limited resource farmer groups. Very dramatic results have been obtained through Extension's demonstration programs with limited resource farmers.

For those who are to remain limited resource farmers (b. above) even a $1,000–2,000 increase in income per year is a high percentage increase and means a great deal to their well-being and their ability to avoid despair or even, perhaps, to avoid seeking welfare aids. In many cases, in addition to help with farm technology and management through a small farms program, these families can be introduced to other Extension programs and greatly helped through counsel on management of their limited income, on housing, nutrition, family management and education, and just becoming more confident, active community citizens with greater pride in their home, their community and their country. Help to them may be viewed as much a social rural community aid as an agricultural aid since they will not come to be an influence on total agricultural production. Rather they will make for stronger rural families and stronger rural communities. It is estimated that each extra dollar of farm income has a 2.7 multiplier effect within the local economy, not counting any processing locally. Thus, adding $2,000 of income per family for 50,000 such families not only means the family-earned $100,000,000 but an additional $270,000,000 or a total, with the rippling effect, of $370,000,000 for the rural communities of America. That is rural development at its best because it carries the humanitarian component with it. It would be sound national policy to provide such Extension educational help and personal counsel to these families as a matter of national policy in preference to poverty level existence and welfare aid they may otherwise need and seek.

For those limited resource farmers who have the potential and desire to become viable commercial family farms there is a far greater potential, economically. They account for an estimated 10–15% of the 1,794,000 of the farms with less than $20,000 gross cash farm receipts, or some 250,000 families. As a matter of fact, a substantial segment of the 565,000 *commercial* family farms with $20,000 to $39,999 receipts are also in low economic positions and need help similar to that needed by this group with under $20,000 receipts. For example, $15,000 receipts from a crop farm may be equivalent in family living dollars to $30,000 receipts from a dairy farm; or a dairy farm in the northern climates which has $25,000 gross receipts may be in as near poverty situation as a dairy farm with $20,000 in a more temperate area. So there are at least a half million limited resource farmers who wish to and can become, with educational and management counsel, viable economic commercial farms. Again, if Extension could assist 50,000 of those families a year to move toward that goal and to increase their receipts by an average, after a two or three year period, of as little as $5,000 per family, that would mean a gross return thereafter of $250,000,000 per year in rural America directly and ¾ billion dollars with the rippling effect. Add to this group those described in a. above and the total effect is a rural development program worth well over 1 billion dollars to the nation, not to mention the social gains.

The main target group, however, is the lower end of the continuum scale of limited resource farmers.

IT IS POSSIBLE

Very dramatic results have been obtained by farmers where Extension has piloted work with paraprofessional aides working with limited resource farmers under supervision of special farm management agents. Attached is a comparison of results of a pilot program in New York State with one professional working with 30 limited resource dairy farms with less than 40 cows but of similar size and participating in the Extension farm records program. In the year 1975–1976 the *net* cash farm income in the pilot farms averages +43% compared to a +7% for the others. Gross farm receipts increased on the pilot farms by an average of over $7,500. Missouri records show similar progress with a 3.5:1 cost/benefit ratio. A Wisconsin pilot program with limited resources has published an initial report which is attached with an economic summary to be published shortly. A study in Texas in 1972 showed the following increases in use of three major USDA agencies by limited resource farmers in such a pilot program:

SCS+173%; ASCS+200%; FmHA+427%.

(Cassette recording and slides of Wisconsin limited resource farmers.)
(Cassette recording of Texas limited resource farmers.)

RESOURCES NEEDED

So for the President, the Congress, the USDA and the Cooperative Extension Service to boldly move forward with major resources to assist limited resource farm families is not a gamble. It is a tested and predictable program that constitutes one major part of a meaningful rural development program for America.

A ratio of one specialist to six agents and one agent to six paraprofessionals has proven effective. Total cost for salary, overhead, and support costs is about $35,000 per full-time specialist, $25,000 per county staff, and $14,000 per paraprofessional. One paraprofessional can work with an average of thirty to forty farm families on an intensive basis per year and may need to work with them for up to three years. Experience has shown that with properly designed programs, participants can be integrated into ongoing Extension educational programming after this period of time. Using these averages, the cost per year, per farm family, would be approximately $500. The Cooperative Extension Service stands ready to undertake an intensive effort with small farms.

FARMS WITH GROSS SALES OF LESS THAN $20,000 AS A PERCENTAGE OF ALL FARMS BY STATES

[Based on 1974 census of agriculture preliminary reports]

	All farms	Farms with gross sales of less than $20,000	Small farms as a percentage of all farms
Alabama	60,756	50,652	83.2
Alaska	333	273	81.9
Arizona	6,602	4,167	63.1
Arkansas	53,497	38,721	72.4
California	73,549	46,404	63.1
Colorado	26,896	15,522	57.7
Connecticut	3,799	2,484	65.4
Delaware	3,574	1,770	49.5
Florida	34,937	26,816	76.8
Georgia	58,413	41,840	71.6
Hawaii	3,298	2,493	75.6
Idaho	24,810	14,117	56.9
Illinois	115,059	57,893	50.3
Indiana	92,349	61,880	67.0
Iowa	129,404	49,889	38.6
Kansas	81,909	46,735	57.1
Kentucky	109,725	95,559	87.1
Louisiana	35,466	26,912	75.8
Maine	7,020	4,229	60.2
Maryland	16,285	10,465	64.3
Massachusetts	4,970	3,378	67.9
Michigan	68,638	51,602	75.2
Minnesota	102,112	55,411	54.3
Mississippi	57,375	48,320	84.2
Missouri	121,272	92,074	75.9
Montana	24,285	12,317	50.7
Nebraska	68,973	30,561	44.3
Nevada	2,218	1,413	63.7
New Hampshire	2,821	2,062	73.1
New Jersey	8,055	5,421	67.3
New Mexico	12,387	9,172	74.0
New York	46,288	27,497	59.4
North Carolina	99,939	77,526	77.6
North Dakota	43,366	17,365	40.0
Ohio	97,697	69,896	71.5
Oklahoma	73,649	57,008	77.4
Oregon	29,990	22,323	74.4
Pennsylvania	56,470	37,973	67.2
Puerto Rico			
Rhode Island	710	501	70.6
South Carolina	31,948	26,035	81.5
South Dakota	43,653	20,064	46.0
Tennessee	102,474	93,242	91.0
Texas	185,572	148,884	80.2
Utah	13,130	9,860	75.1
Vermont	6,270	3,249	51.8
Virginia	55,581	46,697	84.0
Washington	32,514	20,661	63.5
West Virginia	19,123	17,879	93.5
Wisconsin	92,636	55,053	59.4
Wyoming	8,329	4,795	57.6
Total United States	2,450,126	1,666,903	68.0

[Based on 1969 Census of Agriculture Figures]

	Total number of farmers	Small farmers (class III, IV, V, and VI)	Ratio of small farmers to total (percent)	Part-time part-retired farmers	Ratio of part-time part-retired farmers to total (percent)
Alabama	72, 491	31, 210	43	32, 834	45
Alaska	332	130	39	142	39
Arizona	5, 890	2, 287	39	1, 313	22
Arkansas	60, 433	27, 557	46	17, 671	29
California	77, 875	34, 447	44	20, 031	26
Colorado	27, 950	14, 328	51	5, 343	19
Connecticut	4, 490	1, 677	37	1, 330	30
Delaware	3, 710	1, 495	40	733	20
Florida	35, 586	16, 101	45	12, 789	36
Georgia	67, 431	29, 937	44	23, 826	35
Hawaii	3, 896	2, 045	52	1, 245	32
Idaho	25, 475	12, 888	51	5, 055	20
Illinois	123, 565	61, 592	50	19, 462	16
Indiana	101, 479	51, 042	50	29, 978	30
Iowa	140, 354	67, 980	48	13, 619	10
Kansas	86, 057	50, 510	59	14, 520	17
Kentucky	125, 069	69, 568	56	47, 732	38
Louisiana	42, 269	19, 517	46	16, 251	38
Maine	7, 971	3, 050	38	2, 286	29
Maryland	17, 181	7, 811	45	4, 657	27
Massachusetts	5, 703	2, 340	41	1, 673	29
Michigan	77, 946	36, 895	47	29, 599	38
Minnesota	110, 747	66, 256	60	17, 639	16
Mississippi	72, 577	31, 481	43	33, 799	47
Missouri	137, 067	76, 193	56	41, 438	30
Montana	24, 953	13, 057	52	3, 404	14
Nebraska	72, 257	39, 160	54	6, 607	9
Nevada	2, 112	1, 032	49	395	19
New Hampshire	2, 902	1, 115	38	1, 064	37
New Jersey	8, 493	3, 383	40	2, 402	28
New Mexico	11, 641	5, 851	50	3, 070	26
New York	51, 909	20, 314	39	15, 400	30
North Carolina	119, 386	64, 116	54	40, 481	34
North Dakota	46, 381	31, 670	68	3, 201	7
Ohio	111, 332	54, 518	49	39, 208	35
Oklahoma	83, 037	46, 898	56	25, 620	31
Oregon	29, 063	12, 375	43	10, 479	36
Pennsylvania	62, 824	26, 726	43	21, 455	34
Puerto Rico					
Rhode Island	700	284	41	201	29
South Carolina	39, 559	18, 388	46	17, 118	43
South Dakota	45, 726	27, 120	59	3, 664	8
Tennessee	121, 406	57, 311	47	57, 844	48
Texas	213, 550	107, 420	50	76, 449	36
Utah	13, 045	6, 378	49	4, 027	31
Vermont	6, 875	2, 378	35	1, 757	26
Virginia	64, 572	32, 093	50	26, 084	40
Washington	34, 033	14, 131	42	10, 690	31
West Virginia	23, 142	8, 763	38	13, 285	57
Wisconsin	98, 973	56, 249	57	18, 806	19
Wyoming	8, 838	4, 497	51	1, 242	14
Total	2, 730, 253	1, 373, 564	50	798, 928	29. 26

ATTAchment A

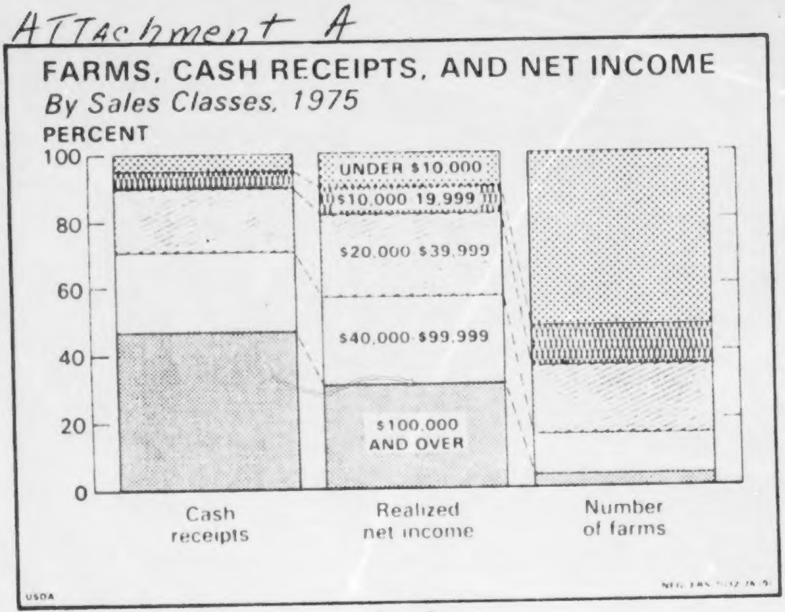


Figure 4

FARMS, CASH RECEIPTS, AND NET INCOME, BY SALES CLASSES, 1975

Sales classes	Cash receipts from farming including other income		Realized net income		Farms	
	Amount (millions)	Percentage	Amount (millions)	Percentage	Number (thousands)	Percentage
$100,000 and over	$42, 750	47	$6, 956	31	110	4
$40,000 to $99,999	21, 637	24	5, 952	26	339	12
$20,000 to $39,999	17, 148	19	5, 716	25	565	20
$10,000 to $19,999	5, 141	5	1, 777	8	326	12
Under $10,000	4, 696	5	2, 290	10	1, 468	52
All farms	91, 372	100	22, 691	100	2, 808	100

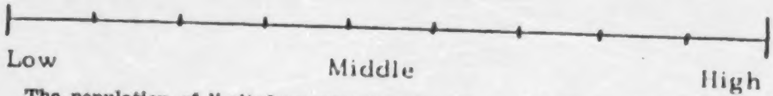
Source: Data from Farm Income Statistics, July 1976 (FRS). Handbook of agricultural charts, No. 504, 1976.

THE TARGET GROUP

(Prepared by D. H. Seastrunk, Assistant Director, Texas Agricultural Extension Service, May 1977).

Current National guidelines define limited-resource farmers as those who gross less than $20,000 annually from their farming operations. From a National point of view, these guidelines should be redefined at state, district, county, and community levels. It is essential that this process of redefinition of guidelines be followed at each level. Otherwise, the true identity of the limited-resource farm population becomes confused. The terms "small farms", "marginal farms", and "family farms" represent different concepts in the minds of different people.

One useful procedure is to define limited-resource farmers with the assistance of a continuum scale such as the one below.



The population of limited-resource farmers in a given area will be distributed along this scale, ranging from low to high. If farm income is used as the criteria for plotting a given farmer's position on this scale, it can be used to determine if he falls in the high, middle, or low-income group. This exercise should be helpful in delineating the specific target group to be assisted in any area.

While each category of farmers can benefit from similar assistance, a truly effective educational program must take into consideration the subtle differences that exist. Secondly, an indepth understanding of these differences will reduce the likelihood that conventional teaching methods and techniques used with commercial farmers will be applied.

For program development purposes, the farmers who fall on the lower one-third of the continuum should be considered as the primary target group. This is essential in communicating the idea that the population to be assisted has different characteristics, needs, and interests. It facilitates an understanding that while traditional Extension educational methods have proven successful with commercial farmers, a somewhat different approach will be required with this clientele group. In addition, it is easier to assist those individuals located on the high end of the scale. In order to obtain maximum results and recognition, a tendency alway exists to more toward the high end of the scale in selecting program participants. As a result, program developers must anticipate this tendency and build into the program appropriate safeguards to counteract this drift. If this critical step is not achieved at the beginning of the program effort, any further effort to correct the trend toward the high end will meet increased resistance by those involved. Therefore, it would seem that the primary target audience should be initially defined as those on the lower end of the scale.

CLASSIFICATION OF TARGET AUDIENCE

(Prepared by Dr. D. H. Seastrunk, Assistant Director, Texas Agricultural Extension Service, May 1970).

Generally, limited-resource farmers can be classified into three different groups. One useful procedure is to classify them according to the intensity of their agricultural operation. Using this system, limited-resource farmers can be classified as full producers, limited producers, or nonproducers. A classification system of this type will provide guidance in packaging educational materials to meet their respective needs. It also will provide guidance in evaluating the results obtained from the programs.

The following is a suggested classification procedure which could be used.

Group 1—Full producers.—Farmers classified in this group generally are full-time farmers. They may have limited resources available for use in their farming operations. However, age and health are not major limiting factors.

Goals.—Farmers in this group should be helped to:

1. Increase the efficiency of the farm operation.

2. Increase income.
3. Enlarge operation.
4. Improve production, marketing, and management skills.

Educational assistance needed:

1. Production information.
2. Technical recommendations.
3. Help to learn basic skills needed to implement recommendations.
4. Marketing information and assistance on a personalized basis.
5. Help with decision-making.

Group 2—Limited producers.—In addition to limited resources, farmers in this group have one or more physical limitations such as age and health, which prevent them from utilizing all of their resources.

Goals.—Farmers in this group should be helped to.

1. Clarify personal goals and determine level of achievement expected.
2. Solve problems using information provided by Extension or other sources.
3. Adapt operation in keeping with personal limitations.

Educational assistance needed:

1. Information to solve specific problems.
2. Information as to where additional assistance can be obtained.
3. Help to learn basic skills needed to implement technical recommendations.

Group 3—Nonproducers.—Individuals or families living on a farm or in a rural area who are not actively engaged in producing crops or livestock fall into this category.

Goals—Farmers should be helped to:

1. Improve level of living by referring them to other sources for service-type assistance.
2. Become involved in community-type activity.

Educational assistance needed:

1. Referral services
2. Information

COMPARISON SAME 15 CHENANGO COUNTY, LIMITED RESOURCE PROGRAM FARMS, 1975 AND 1976

Item	Average of 15 farms		Percent change
	1975	1976	
Financial summary:			
Total cash farm receipts	$30, 226	$38, 083	+26
Total cash farm expenses	$22, 621	$27, 233	+20
Net cash farm income	$7, 605	$10, 850	+43
Total cash farm receipts	$30, 226	$38, 083	
Increase in livestock, feed, and supply inventories	[1] $2, 200	$4, 181	
Total farm receipts	$32, 426	$42, 264	+30
Total cash farm expenses	$22, 621	$27, 233	
Overhead costs including depreciation, unpaid family labor, interest on equity capital	[1] $8, 000	$9, 090	
Total farm expenses	$30, 621	$36, 323	+19
Labor and management income	$1, 805	$5, 941	
Number of operators per farm	1	1	
Labor and management income/operation	$1, 805	$5, 941	+229
Selected business factors:			
Average number of cows	34	35	+3
Man equivalent	1. 5	1. 3	−13
Total crop acres	113	97	−14
Milk sold per cow (pounds)	9, 466	10, 319	+9
Hay crop per acre (tons)	1. 9	2. 2	+16
Corn silage per acre (tons)	10. 5	10	−5
Cows per man	23	27. 5	+20
Milk sold per man	215, 800	280, 700	+30
Value of milk sold per hundredweight	$8. 59	$9. 81	+14
Hired labor per cow	$6. 66	$3. 47	−48
Dairy feed bought per cow	$261	$283	+8
Cash machinery expense per cow	$83	$100	+20
Cash livestock expense per cow	$41	$55	+34
Crop expense per cow	$45	$50	+11
Total cash expense per cow	$661	$769	+16
Farm capital per cow	$2, 603	$2, 738	+5

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[1] Estimates based on change in business size, crop production, Jan. 1976 inventories and 1976 coefficients.

COMPARISON SAME 15 EASTERN PLATEAU, DAIRY FARMS WITH LESS THAN 40 COWS, 1975 AND 1976

Item	Average of 15 farms		Percent change
	1975	1976	
Financial summary:			
Total cash farm receipts	$39, 278	$44, 450	+13
Total cash farm expenses	$26, 791	$31, 055	+15
Net cash farm income	$12, 487	$13, 395	+7
Total cash farm receipts	$39, 278	$44, 450	
Increase in inventories	$1, 528	$1, 327	
Total farm receipts	$40, 806	$45, 777	+12
Total cash farm expenses	$26, 791	$31, 055	
Overhead costs	$12, 231	$13, 628	
Total farm expenses	$39, 022	$44, 683	+14
Labor and management income	$1, 784	$1, 094	
Number of operators per farm	1	1	
Labor and management income/operator	$1, 784	$1, 094	−38
Selected business factors:			
Average number of cows	33	31	−6
Man equivalent	1. 5	1. 5	....
Total crop acres	90	89	−1
Milk sold per cow (pounds)	12, 430	12, 923	+3
Hay crop per acre (tons)	2. 6	2. 5	−3
Corn silage per acre (tons)	14. 2	13. 8	−2
Cows per man	22	21	−4
Milk sold per man	273, 467	267, 067	−2
Value of milk sold per hundredweight	$8. 52	$9. 93	+16
Hired labor per cow	$17. 90	$38. 45	+114
Dairy feed bought per cow	$315	$368	+16
Cash machinery expense per cow	$88	$129	+4
Cash livestock expense per cow	$91	$109	+16
Crop expense per cow	$67	$64	−9
Total cash expense per cow	$812	$1, 002	+24
Farm capital per cow	$3, 638	$4, 345	+13
			9

THE FEDERATION OF SOUTHERN COOPERATIVES,
RURAL TRAINING AND RESEARCH CENTER,
Epes, Ala., May 5, 1978.

Hon. PATRICK J. LEAHY,
U.S. Senate,
Russell Senate Office Building,
Washington, D.C.

DEAR SENATOR LEAHY: Thank you for your recent letter inviting our comments at the hearings of your Subcommittee on Agricultural Research and General Legislation concerning non-farm rural research priorities of the U.S.D.A. and the State Land Grand System.

We hope our comments, which are attached, will not be too late to be entered in the hearing records.

Please contact us if you have any questions on our statement. Please also place us on the mailing list to receive the printed records of your hearings.

Cooperatively yours,

JOHN ZIPPERT,
Director of Program Operations.

Attachment.

STATEMENT BY FEDERATION OF SOUTHERN COOPERATIVES

INTRODUCTION

The Federation of Southern Cooperatives wishes to express its deep appreciation to the Honorable Senator Patrick J. Leahy for extending this invitation to testify before the Subcommittee on Agricultural Research and General Legislation. We feel privileged and honored to be able to voice our opinion on issues we feel strongly about at these important and timely hearings.

The Federation is a regional service, resource and advocacy association, for a constituency of 30,000 families organized into 120 cooperatives, in rural communities across the South. Our membership is composed primarily of

Black and low-income people, although we also have White, Chicano and Native American members. Since the Federation was chartered in 1967, we have grown to include members from fourteen Southern states, stretching from the Rio Grande in Texas to the eastern shore of Virginia. Given the size and scope of our membership, we therefore believe we can speak authoritatively of developmental needs of rural folks.

Although a large segment of our constituency is engaged in farming, we have many who are not so that the need for non-farm rural research touches a sizeable portion of our membership. Furthermore, it is our belief that the farm and non-farm sectors of the rural economy are not mutually exclusive. Rather, their fates are tied to each other; the one being totally incapable of sustaining any meaningful growth without the other.

We believe that rural non-farm research as conducted by the USDA and the land grant systems should be directed towards the issues listed herewith.

ENERGY

As non-renewable fossil fuels become scarcer, one thing is certain: the price of energy will continue to rise as demand outpaces supply. Rural residents spend anywhere between 15 and 40% of their income on energy needs and increasing energy bills will only cause more economic strains on those who are least able to afford them. Research must thus be directed at developing alternative renewable energy sources which are not only cheaper than traditional sources, but also indigenous to rural communities. There is need for more research on wood heating stoves, solar space and hot water heaters, windmills—as an electricity source and methane digesters. These alternatives are not only potentially cheaper than oil and natural gas, but they are relatively easily installed by individual homeowners and furthermore, they are for the most part non-polluting.

Energy costs not only impact on housing, but also in industry and transportation. Research needs to be directed at the impact of rising energy costs on industrial location in rural areas. That is, we need to know whether rising energy costs have encouraged or discouraged industries in non-metropolitan areas. If the research discovers that energy costs have kept industries away from rural areas, then policy can be developed to counteract this as industrial jobs are badly needed.

APPROPRIATE TECHNOLOGY

With the advent of rising energy costs and a growing reliance upon more sophisticated machinery and equipment, there exists an urgent need for research in technologies which require small amounts of capital and use cheap renewable community-based materials and fuels. These appropriate or community technologies would be labor-intensive, thereby providing badly needed employment and would generally stimulate the local economy. Because of the simplicity of their construction and their inexpensive material and fuel costs, they would easily be afforded by the majority of rural residents. They would also instill in people a sense of self-determination and the added satisfaction that comes with having an influence over the technological base of their communities.

Not enough resources are being directed at indigenous technologies such as solar energy, greenhouses, windmills, energy from domestic animals, waste recycling, cellulose insulation and so forth. The Federation believes that only when appropriate technology is addressed in a serious and systematic way will problems such as rural unemployment and uneven income distribution be soluble.

HOUSING

Even though the number of sub-standard houses has declined substantially over the last two decades, rural residents are still beset with housing problems. Heating costs have increased much faster than personal incomes, thereby making it costly to operate a home. Rising transportation costs are also affecting the location of houses. Research is needed in housing designs which would not only reduce the consumption of conventional fossil fuels while increasing the reliance on renewable non-fossil sources, but also on locations which while minimizing transportation costs are at the same time desirable.

Rural residents, especially minorities and the poor, have traditionally encountered much difficulty in obtaining mortgage credit for housing. Research should focus on ways to solve the problem of credit availability for those rural residents who have existed at an economic disadvantage.

RURAL CREDIT UNIONS

Lending institutions such as banks, FmHA and savings and loans have not been very receptive to the poor and minorities who want to borrow money for whatever reason. These neglected are generally left with no other institutions to which they can turn for loans. The result has been unrepaired houses, undercapitalized farms, poor health services, and undeveloped and under-developed small businesses—to mention but a few. The only recourse is for these people to collectively form their own credit union in order that they may obtain the financing and capital they need. Research is needed to determine the optimum number of members as well as minimum capital base these credit unions must have in order to provide badly needed service to their low-income members as well as to remain in business. There is also a need for research in the areas of minimum membership contribution and dividends payable.

TRAINING AND RETRAINING OF ADULTS

A sizeable segment of the rural population consists of residents over the age of 30. Most of these adults have family responsibilities. For these people, non-farm job prospects are very dim as they lack the skill and sophistication demanded by modern industry. The education which those fortunate few were able to receive in their younger days is increasingly becoming obsolete with changing job requirements. To enable this group of residents to keep apace with a dynamic job market, there is a need for training methodologies to upgrade the skills of not only those adults who had previous training, but also those who are unskilled. It must be noted that the problem of adult training is entirely different from that of providing skills to young people. The former are more likely to be less formally educated but more experienced, while the latter have had more educational opportunities yet are less experienced. The emphasis on the need for providing training for adults with responsibilities does not negate the need for equipping young rural residents with marketable skills. Youths are apt to migrate to urban areas because of the frustration of not being able to land a job after high school. Thus if ways are not found to match job vacancies with the skills these people possess, urban concentration and its attendant undesirable social and economic effects will undoubtedly continue.

IMPACT OF RURAL INDUSTRIALIZATION

Another area of non-farm rural research that relates to employment problems is research into the impact of rural industrialization. Our Training Center and many of our members live in the impact area of the Tennessee Tombigbee Waterway, a major Federal $1.6 billion public works project. This project will bring major industrial changes to a predominantly rural area of southwest Alabama and northeast Mississippi. Yet, there has been virtually no credible research into the human resource development impacts of this project on local people in the Waterway Corridor.

Little consideration and study has been given to the manpower, educational, housing, health care, cultural and other socio/economic/political problems of people in the impact area of this Waterway. The Tennessee Tombigbee Waterway is one of many industrial projects coming to the rural Southeast and other rural areas. There are other similar developments, e.g., waterways, highways, nuclear power plants, bring industrial development and environmental changes to rural areas without appropriate research as to their implementation and impact.

The time is long overdue for research on the effectiveness of researchers as well as the extension officers themselves. Requests by our membership for extension officers to assist them with their farm and non-farm problems have for the most part fallen on deaf ears. This, therefore, brings into question the kinds of people the extension service is being responsible to. The Federation's membership is predominantly low-income and non-White people who can least afford to be ignored by the extension system. We, therefore, believe it long overdue for the extension service to reevaluate the constituency it was initially established to serve and determine whether or not its goals are being met. We can document many cases across the Southeast where farmers and non-farmers have *never* seen the county agent in spite of repeated solicitations for assistance. We cannot comprehend how a certain county in the Black Belt of Alabama is selected as one of the most progressive counties in the state as far as rural development is concerned when the vast majority of its Black residents who make up over half of its population is subsisting perilously close to the poverty level. It is because of the general unresponsiveness of the extension service to the relevant rural development needs of our constituency organizations like the Federation must assume a leadership role in the betterment of the quality of rural life.

If the results are not relayed to rural residents for their use and application, the effort may be regarded as futile. The Federation believes this to be a major defect in rural research. It seems as though research and its findings have been the domain of only a select few as the masses have generally been excluded.

To counter this, we believe that research is too important to be left solely to researchers. There must be a greater community involvement in the issues selected, the way the research is conducted and the dissemination of pertinent results. This means that local communities should be involved all the way in the decision-making process. The extension system should have a contact person in every significant population locality to ensure that the research is being done with that community's interest at heart. Information distribution should not be left only up to the county agent and his extension staff, but should also be done by schools, churches, civic bodies, and community organizations.

One remedy for the problems listed above lies in the expanded implementation of the authority in Title V of the Rural Development Act for involving non-Land Grant institutions in rural research. Expanding the group of eligible institutions, including non-traditional community based non-profit organizations, that could qualify to receive Federal research support will increase the scope, quality and responsiveness of farm and non-farm rural research.

SOUTHERN RURAL DEVELOPMENT CENTER,
Mississippi State, Miss., May 10, 1978.

Hon. PATRICK J. LEAHY,
U.S. Senate,
Committee on Agriculture, Nutrition, and Forestry,
Washington, D.C.

DEAR SENATOR LEAHY: Thank you for giving us the opportunity to submit a statement to the hearings of the Agricultural Research and General Legislation Subcommittee. You will please find five copies of our statement enclosed.

To aid us in our preparations, we made contact with Dave Clavelle of your office. We have attempted to speak to those areas in which he suggested. We trust that our statement will be helpful to the work of your subcommittee.

Sincerely yours,

WILLIAM W. LINDER, *Director.*

Enclosure.

STATEMENT FROM THE SOUTHERN RURAL DEVELOPMENT COMMITTEE

BACKGROUND

A mid-decade Federal study shows that the long migration from the country to the city not only has halted—a fact noted for the first time in this century in the 1970 census—but that historic reversal has speeded up.

During the past five years the nation's metropolitan counties, those with a city of at least 50,000 people, grew less than 3 percent in population while non-metropolitan counties gained more than 4 percent.

What this means is that people are returning to rural America and children are no longer leaving to go off to the big city. All of those returning or staying in the rural areas are not farmers. Only 20 percent of the rural population are farmers.

This means that this new area of growth needs new jobs, health care, education outlets and other opportunities of good life and wholesome family living. The new emphasis on rural living needs guidance.

HELP PROVIDED

The Rural Development Act of 1972 represented a renewed pledge to make rural America a better place to live and work. The central intent of Title V is the implementation of activities that create, interpret, disseminate and apply information relevant to rural people. In its short life since 1972, Title V has proven to be instrumental in improving the quality of life in rural America. It must be maintained.

This improvement has come from the innovations found within the Act. One major innovation is the provision that academic disciplines outside of agriculture and colleges other than land-grant universities be involved. Another innovation is the provision that the program of work in each state be developed with the advice of a special rural development advisory council. In addition to educators, the council is made up of farmers, workers, business and local government personnel.

Two additional innovations concern the interdependency of research and extension activities and, perhaps the most dramatic is the shift of emphasis in agricultural research and extension to include rural development. This last innovation alters a pattern that has been in existence for over 100 years. This is especially significant since gains in technology have changed our rural economy from one that was solely agricultural to one that is more diversified.

The success of the programs implemented through Title V has been significant. Programs have assisted the local people in solving problems and opening opportunities to economic and educational advancement, health and welfare benefits, better housing, involvement in local government, and a whole spectrum of other activities aimed at improving life in rural communities.

Following are just some of the many Title V success stories occurring in the South—programs in which local people have brought forward their community's needs and worked hand-in-hand with Title V planners to produce the best solutions.

Community facilities.—Oklahoma is developing solid waste disposal systems * * * Louisiana is providing better housing * * * North Carolina receives leadership development * * * Tennessee gets improved roads, parks, housing, and health facilities * * * Texas looks at land development * * * Puerto Rico brings new jobs, markets, and opportunities via a new bridge to an isolated community.

Economic development.—North Carolina teaches management, as does Mississippi * * * Tennessee opens new markets for homemade and homegrown products * * * Mississippi bond issue will raise money for industrial development * * * Virginia finds jobs for unemployed young people * * * Georgia benefits from economic forecasting * * * Alabama develops an industrial park.

Environmental improvement.—Mississippi works for recreational areas * * * Louisiana and North Carolina produce a resource inventory for environmental improvement * * * Arkansas eliminates water well pollution.

People building.—Virginia involves local officials in leadership planning * * * North Carolina offers workshops in supervision and management * * * Louisiana's undertrained youths find employment after job readiness courses * * * Georgia has surveyed necessities of needy families on food stamps * * * Mississippi benefits from education and job training * * * Kentucky's paraprofessionals have formed 38 community development organizations, completing nearly 200 local projects * * * South Carolina develops a regional health complex * * * Mississippi offers town meetings at which citizens meet and question their elected officials.

This is just a sampling. Listing the projects and accomplishments along with the people, groups, and local government agencies involved in all of these Title V programs would take page after page. But the story comes out the same—Title V buys a better life for rural people.

CONCERN EXPRESSED

The Board of Directors of the Southern Rural Development Center expressed their concern for the elimination of the Title V program within the Rural Development Act of 1972 as currently proposed by the executive budget.

The Board is extremely troubled over this action. It would not only put the regional centers out of business but would end a program which has demonstrated the ability to assist local citizens in organizing, identifying and then meeting their own felt needs through local action programs.

Title V has been most beneficial, the Board feels, especially when you consider the pittance of funds which have been allocated during its brief history. Now that the effectiveness of the program has been proven, both from a process as well as a dollar return viewpoint, it certainly is not the time to completely eliminate the effort.

While it is impossible to calculate the dollar value of this local community based program, more than ten dozen (120) successful programs and projects *in the South alone have* brought measurable progress to the people in at least 142 counties, virtually on a shoestring.

Title V ought to be financed at a level where it really could be far more effective in helping more of rural America. This is of special concern since the President's current urban policy seems to forget the magnitude of problems found in towns and counties under 50,000 population.

Restoring the Title V appropriation to the Rural Development Act legislation should be implemented. The recommendation made by the National Association of State Universities and Land-Grant Colleges should be used as a guideline. They are recommending $5.0 million for Section 502(a) and $4.0 million for Section 502(b) of the Rural Development Act of 1972 for FY 1979. Additionally, restoration of funds for the PL 89–106 program which included $300,000 for the regional Rural Development Centers should be implemented.

Actually, much more monies should be allocated but, to maintain the efforts already in place, the funds for FY 79 should at least be at the level recommended above.

REGIONAL SUPPORT

The responsibilities of the Southern Rural Development Center are authorized under Title V of the Rural Development Act and Cooperative State Research Service to include the job of completing and supporting state Title V Extension and Research programs. The Center's primary clientele is the Research and Extension staffs of the 27 land-grant institutions in the 13 states, plus Puerto Rico, who have rural development or community resource development responsibilities and interests.

Effective regional participation is critical to the success of rural development efforts: supporting a region-wide cooperation is now the priority orientation of the SRDC.

PRIORITIES

Based on the Southern State Plan of Work submitted for implementation of Title V, seven priority topical areas were selected:

1. Jobs and job training,
2. Industry,
3. Waste disposal and water supply,
4. Housing,
5. Leadership development,
6. Land use planning and zoning, and
7. Health services.

The Southern Rural Development Center's Plan of Work is aimed at meeting the needs expressed in this list of priorities.

PROJECTS TO MEET PRIORITY NEEDS

Workshops.—A basic underlying tenet of the Center has been the promotion of increased Extension-Research communication, dialogue and joint programming. Title V authorizes this interaction, and the Center has the capacity to bring together experts across the state lines and from various disciplines to focus on problems common to the region. Examples of how this was accomplished are found in the meeting convened by SRDC of representatives from the Southern Land Economics Research Committee, the Southern Extension Public Policy Affairs Committee, Extension Service, USDA, and 1890 institutions to discuss: Issues, educational programs, policy considerations, training for professionals, and joint programming.

With each group reporting to its parent group and making recommendations to the Regional Extension and Experiment Station Directors, the SRDC led an appropriate regional effort if desired by the participating groups.

Also, Research Technical Committees have asked the Center to help acquaint action agencies with projects, establish closer working relationships, and obtain ideas for future research.

Bridging the gap in communication between Research and Extension requires coordination of three factors: Research, Extension, and users. The workshops developed an effort to establish a joint communication network for increased awareness of needs and goals of each of these sectors.

Functional networks.—Professionals in the region have much to contribute to rural development programs of the southern Research and Extension agencies. The SRDC's answer to involving these professionals is through its Functional Networks: scientists and educators have been selected to lead groups of cooperating professionals in pooling research expertise.

SRDC has 10 Functional Networks in operation. Network titles are:

Land Use Issues,
Citizen Participation,
Evaluation Research Literature,
Industrial Development,
Health Care,
Educational Needs Projection,
Impact of Governmental Transfer Payments or Human Resource Development,
Solid Waste Disposal and Financing,
Housing Research, and
Small Farm.

Each Functional Network is charged wtih completing a thorough inventory of research applicable to its particular problem area. Pertinent principles will be extracted and published. The Networks have the common goal of cataloguing current state of research knowledge. Specifically, they are inventorying research in their area of interest, extracting concepts which give common threads, and preparing concrete results for the Center to publish. Workshops in these areas are being held to acquaint professionals and other interested people with this base information.

In addition to the bibliographies, which will document for professionals, researchers, and program planners the where and how of factual information for their work in the ten areas studied, Networks will be preparing other publications—for varied audiences, ranging from research professionals to laymen—applying their results to everyday plans and problems of rural development. The SRDC will be publishing these reports.

Dissemination of information.—Rural development and community resource development staffs have needed an information funnel for the region, a centralized flow of pertinent facts, figures, reports of program accomplishments, and designs for action. The SRDC has sought to provide a cohesive, centralized information source for the region. The Center issues regular reports on activities of regional interest and meets special or short-term needs for publications when necessary.

Publications.—The SRDC, in its first year, inaugurated a publications series designed to furnish several types of materials and information: (1) summaries or reports of the states' Title V work in rural development; (2) useful or timely reports from several sources of applicability to several phases of rural development work; and (3) reports of the work of the Center itself. The publications series now numbers 24 titles.

Magazine.—Since 1976, the SRDC has published a quarterly newsmagazine, Rural Development Research and Education. Distributed to about 2,000 professionals and educators throughout the region, this news magazine offers reports of what is new and successful in rural development programs and research.

Visits to institutions.—One of the main emphases of the SRDC is to assist the 27 land-grant institutions throughout the South in their existing and planned rural development research and programs. In order to build a strong base of relationship, the Center periodically conducts visits to those campuses.

Consultants.—In an attempt to be of greater service to the Title V programs being implemented in the southern region, the Center from time to time secures the services of key personnel to assist in the various phases of work being accomplished in rural development. An example of this service was the Evaluation Workshop in South Carolina for the Title V staff and others.

The States' title V plans.—Another underlying tenet of the Center's activities is promotion of increased Extension-Research communication and programming. Title V of the Rural Development Act specifically calls for cooperative efforts by the Extension Services and Experiment Stations for rural development.

In just the last few years, these programs have demonstrated dramatic success in reaching out to meet the needs of local people. With relatively little investment in dollars, Research and Extension projects have helped communities to better their way of life in both small and large projects.

Other assistance.—The Center has stood and continues to stand ready to assist the individual states in any appropriate way with training, information-gathering, consultation, or other support. Examples of assistance provided by the Center for the states are found in two Extension Service, USDA, Pre-Proposals, one for Texas and the other for Mississippi.

PEOPLE SERVED

The grass root audience effected by Title V is the 67 million people living in rural America. This population encompasses 17,500 communities.

Add to this number the continuing stream of urbanities who have become disillusioned by the big city and are now moving to rural America at a rate of 380,000 per year. A 1970 survey of people living in metropolitan areas, found that 65 percent said, "I want to get to the rural life."

It was also in 1970 that construction was 3½ times higher in rural America, manufacturing growth became 2 times greater, and the wage gap between rural and city began to close.

These figures make us proud. But, this growth needs guidance. Title V is pointing the way to a better life. Without Title V, we could import all the problems of the big city.

INPUT FROM RURAL PEOPLE

Title V is unique in the provision that the program of work in each state be developed with the advice of a special rural advisory council made up of not only representatives from the educational institutions, but the grass root people themselves. These include farmers, workers, business, finance and local government and area planning and development districts.

UNIFICATION

Prior to Title V, rural development had been fragmented, nonadditive, and overly positivistic. It had focused too often on "what is" rather than on "what could be" or "what ought to be." More importantly, it lacked a unifying framework to focus on essential issues.

Rural development is currently a long way from being what it should be. But, Title V has caused rural development to have hope. It is Title V that began to surface allocative techniques and set forth the temperament for establishing in the public sector a way of implementing a good life for those that live in rural America.

WHAT IS NEEDED

Several summary points include:

As a minimum compensation, rural communities are owed as much research, planning, and guiding effort as goes into research that has caused a change in the total American life style which has brought on the economic and social problems of rural communities.

Rural areas are made up of groups with reduced or restrained income and employment opportunities, and increasing proportion of aged, declining or inadequate medical and health services, large relative cost of public services, depressing social environments, and decreasing recreational opportunities. America must meet this need.

The problem set will not vanish soon, in parts it will grow more severe in the next decade. To provide more and better answers for questions of five and ten years from now, some base needs to be laid in fundamental models and research directed toward eventual empirical choices and solutions must take place.

Inequitable distribution of the gains and sacrifices of development among metropolitan and non-metropolitan areas should be the foundation upon which broader public concerns over rural development be built.

CONCLUSION

In light of the fact that Title V is providing answers to economic and social problems of rural communities, and that rural areas do have problems that will not go away on their own and that there seems to be an inequitable approach to development, it would seem only appropriate to restore the Title V appropriation to the rural development act legislation. Actually, much more monies should be allocated but to maintain the effects already in place, the funds for FY 79 should at least be at the same level as FY 78.

STATEMENT OF JAMES ALLEN, NATIONAL ASSOCIATION OF FARMWORKER ORGANIZATIONS

Mr. Chairman and Members of the Committee: We would like to thank Senator Leahy for this opportunity to submit written testimony into the Record. We feel that the invitation to testify which was extended to NAFO as a representative of farmworker organizations was an important sign that there is concern about the research and extension service and their lack of contact with, and service to, certain rural minority communities. We do find it unfortunate that due to time limits we were unable to testify before the committee.

The questions which we feel we are in the best position to address are those which relate directly to research and extension as it operates on the state level with farmworkers. This will include an evaluation of farmworkers needs from the research and extension service, the reasons we feel that research and extension has not been adequately done or provided, and finally, an examination of research and extension projects carried on in states which have large farmworker populations in order to evaluate farmworker participation or exclusion.

Farmworkers have so infrequently been included in research projects of rural America, that they are still at the basic stage of needing statistically accurate assessment of their numbers, racial composition, and patterns of settlement and employment. This is absolutely essential basic demographic research as the statistics which have been produced by the government, for example the Department of Labor and HEW, and those produced by organizations like Legal Services, have been widely divergent. Future research and extension projects aimed at advancement of farmworker interests will have to find its base in this type of statistical information and once these statistics are compiled the problematic areas can be more easily defined.

Farmworkers in some cases do need special projects designed for their unique needs, but more often they only need to be included in those projects already being carried on by the states. Some adaptation may need to be made in these projects but the biggest problem is not the project which states operate, nor in the goals of Title V, but rather the obstacles to farmworker participation.

The extension and research service has not adequately established communication and contact with the minority community. Farmworkers as well as certain other minority groups have been traditionally concentrated in separate parts of the community and only in certain parts of the state and contacts within these enclaves have rarely been sought out and maintained by extension/research. This lack of experience with the minorities community has disadvantaged them as a potential project area. The E&R service in the state when asked about their selection of target areas and populations in questionnaires prepared by the National Rural Center repeatedly mentioned their preference for those areas and populations with a history of cooperative efforts in rural development and those which would appear to have a high likelihood of success.

The process of excluding farmworkers from participation in these projects begins with the lack of farmworker imput in the decision making about which projects to pursue. This gets to the whole problem of priorities, the priority setting process, and those who set the priorities.

The process from the beginning is highly prejudiced toward certain parts of the rural community by the placement of the extension service in the agricultural college and the frequent selection of the Dean of the College of Agriculture as the coordinator of both extension and research. The orientation becomes somewhat set from this point and given the small amount of money each state receives all interests cannot be met. The State's Rural Development Advisory Council (SRDAC), which is composed of the general public, could represent an excellent opportunity for farmworker representation and input since the decision as to which projects to pursue every year are made by this Council. They have not been on these councils in the past since the members are chosen by the county commissions or the local extension service in most states, and as has already been pointed out, they have never built up communication with minority communities so they don't have the contacts in those neighborhoods to use to select farmworker representatives. Also given that those positions are unpaid and require travel, it is a great hardship for any low-income person to accept such a position even if it were offered.

The state extension/research service is set up to operate independently of the federal staff. This means that if a state has not properly included minorities in their decision making process or has rarely selected them for their projects target population, there is very little the federal staff can do assuming the state is conforming with the legislative directives of Title V. About the only impact they can have is to put more effort into affirmative action and hope that this effect on staff trickles down to effect other parts of the process. The county office is also very independent of the state office so there are many points at which any efforts may break down. Therefore, farmworkers need to be represented on this council, and on other decision making councils set up by the state and localities, so that they have a part in the actual decision making and these are able to change the conservative preference policies so as to promote projects responsive to farmworkers.

An examination of the states having large farmworker population reveals that there has been only one Title V project which was actually aimed at helping farmworkers. The three states with the largest concentration of farmworkers are Texas, California, Florida. Florida's program completely ignored the farmworker problem while it conducted its programs on the problem of the low income farmers, the low rate of non-farm employment, and substandard housing. No areas populated by farmworkers were included. In Texas, farmworkers were included in the program, but they were seen as simply a resource to be provided to growers and not as a people with unique problems which require equal attention. They were viewed as a labor force which needed to be recruited, trained and relocated into regions where growers needed workers. This project could have potentially been expanded to address the particular employment and living conditions of farmworkers as well, but in fact, housing was only given importance in that it be provided for the labor force. Truthfully, it could not be said that this project was really premised in any way on helping farmworkers and if they were helped it was only incidental to the goal of advancing the agricultural interest of the growers.

We reviewed all of the other states which have a relatively high percentage of farmworkers and we found that only California carried on a research and extension program which was specifically directed toward the needs of farmworkers. California had a joint research and extension project of technical assistance to Indian and Chicano farmworkers cooperatives. The aim was to improve the relationship between low-income groups and the University and to provide the necessary information to assure a successful operation of these farm co-ops. Of course this project is still in keeping with the extension/research orientation toward farmers but it is an attempt to include low income minority groups and their problems. Once they have been included this process sets the stage for future communication which can mean greater responsiveness to other farmworker requests for aid.

We would recommend a complete examination on both the state and national level of the projects which have been carried out, to examine their responsiveness to the minority communities. Renewed efforts must be made to seek minority representation on the decision making committees in order to assure their future equal participation.

UNIVERSITY OF WISCONSIN—MADISON,
DEPARTMENT OF AGRICULTURAL ECONOMICS,
Madison, Wis., May 15, 1978.

Hon. PATRICK J. LEAHY,
U.S. Senate, Russell Senate Office Building,
Washington, D.C.

DEAR SENATOR LEAHY: Your letter dated April 25, 1978, inquiring as to my interest in testifying before the Agricultural Research and General Legislation Subcommittee of the Senate Committee on Agriculture, Nutrition and Forestry on May 4 and 5, arrived at my office on May 4. It was, therefore, impossible for me to appear.

I have taken the liberty of sending you my testimony in writing. I hope it is of some assistance to your committee in its deliberations. Thank you for your interest.

Sincerely,

GLEN C. PULVER, *Professor.*

Enclosure.

STATEMENT OF DR. GLEN C. PULVER, DEPARTMENT OF AGRICULTURAL ECONOMICS, OF WISCONSIN–MADISON, MADISON, WIS.

I am Dr. Glen C. Pulver, Professor of Agricultural Economics and Community Development Specialist of the University of Wisconsin-Madison. I am the current President of the Community Development Society of America. My comments represent my own views and not those of either institution.

There is an urgent need for greater public investment in (1) non-farm, non-food and fiber rural development research, and (2) more Cooperative Extension Service community development agents to work with people at the local level.

My work brings me in contact with rural and small town people throughout the state of Wisconsin on a regular basis. Meetings with economic development committees, county board members, village and town officials and those who work with them on a daily basis provide a clear sense of the major problems of rural areas. The most frequently mentioned concerns are: (1) land use planning, zoning and preservation of agricultural land; (2) the need for good job opportunities and adequate family income; (3) housing for the elderly, low and moderate income families and supportive water and sewer services; and (4) the availability of energy sources at an affordable cost.

Much less frequently mentioned are problems of family stress such as divorce and delinquency, skyrocketing costs of medical care, and environmental pollution. Similar concerns surface at conferences with community developers from other states.

RURAL DEVELOPMENT RESEARCH

Experiment Stations of the Land Grant College System have been the primary source of sound research used by people in rural areas for the past half century. Their linkage with the Cooperative Extension Services in all states has proven itself. Rural people have tremendous confidence in the system, for it has delivered useful and helpful information. They have once again turned to these sources for information to help them with their current rural community problems.

Unfortunately limited assistance has been available. Most Land Grant Colleges have received only minimal financial support for rural development research relating to contemporary community concerns. For example, the Department of Agricultural Economics at the University of Wisconsin has only 3.3 faculty FTE's involved in resource economics research. Of this total, 1.86 FTE's are in natural resources, .25 FTE's in human resources, and 1.22 FTE's are in community economics. No part of their salaries are supported by federal funds new in the past 10 years. They have received some project support from Hatch, the Rural Development Act, and grants from other agencies. Title V of the Rural Development Act of 1972 has been the only addition to research funding aimed at rural development problems which has been received by the Experiment Stations. And now, this minimal support has been dropped in the President's proposed budget.

The research product of this small group has been well received by citizens and policymakers at the state and local level. Its research has impacted development policy in land use planning, zoning, agricultural lands preservation, local government finance, and community economic development. Wisconsin is recognized as a national leader in voluntary land use planning and zoning. Community leaders throughout the state have turned to the University of Wisconsin for assistance in this work. The contribution of University of Wisconsin Agricultural Economists is recognized as a major in recent adoption and implementation of an agricultural lands preservation act. The four major associations of local government in Wisconsin have turned to this same group of Agricultural Economists for clearer understanding of the industrial, residential, and environmental impacts of recent changes in Wisconsin tax law. Economic developers at the state and local level are looking beyond manufacturing in preparing more comprehensive industrial development programs, partly as a consequence of the work of UW Agricultural Economists.

Existing institutional mechanisms in the Land Grant College of the University of Wisconsin have not proven to be barriers to rural development research. Administrators have generally proven to be sympathetic to this work. Funds from Title V of the Rural Development Act of 1972 have been addressed to rural development research. Every effort should be made for the continuation of these funds. Citizens, community leaders, and others who work in rural areas have turned to the Department of Agricultural Economics for information. Significant substantial federal financial support for rural development research would be well used.

COMMUNITY DEVELOPMENT AGENTS

Expanded federal support of Cooperative Extension Service community development agents to work with people at the local level would be of major benefit in rural areas. There is a critical need to provide community organizations and local governments direct educational assistance in establishing priorities, identifying available funding sources, acquiring technical assistance, and gaining useful information important in carrying out a program of work to solve community problems.

Excluding school and other special purpose districts, more than 1,900 units of government provide services at the community level in Wisconsin. They include 72 counties, 176 cities, 390 villages, and 1,268 towns. Over 9,000 elected officials help set policy and manage the affairs of local government.

Increased demands to solve pressing problems are placed on every one of these governmental units. They face the demand for increased government services with concurrent pressure to hold down cost and taxes. They are often forced to assume greater responsibility for program delivery and the resultant increased cost created by state and federal government mandates.

A multitude of state and federal government programs providing technical and financial assistance is available to help in problem solving. They represent, however an ever-changing maze of complicated rules and regulations which appears almost impossible to negotiate. The result is a failure by many communities to apply for support.

Few Wisconsin communities can hope to satisfy all the demands of their people for community services, environmental protection, and economic opportunity. The best that can happen is to establish priorities and work toward their goals, taking advantage of all assistance they can get.

The critical need confronting most local governments and community organizations is assistance at the local level through a person serving as a catalyst in helping the community carry out a program of work aimed at solving its problems. The need is for someone who can know the concerns and politics of the community and who is there on a continuous basis.

The University of Wisconsin-Extension has joined with county boards in 50 of its 72 counties to employ county-based community development agents to meet just such a need. These agents have proven the worth of the system. For example, housing authorities are created and assisted to take advantage of HUD, FmHA and state assistance. This kind of effort is bringing over $1.25 million for new housing in Trempealeau County. An intensive effort in economic development education has brought a $5 million plant to an industrial park in Shawano County. Many other examples could be provided.

Unfortunately, communities in 22 Wisconsin counties remain without this kind of local assistance.

There is adequate proof that the research and outreach programs of the USDA and the Land Grant System can be of major benefit to all people in rural areas. The system has the demonstrated experience, sensitivity and flexibility to carry out meaningful programs for all if provided significant and continuous financial support with which to do so.

NATIONAL FARMERS UNION,
Washington, D.C., May 18, 1978.

Hon. PATRICK J. LEAHY,
Chairman, Subcommittee on Agricultural Research and General Legislation, Senate Agriculture Committee, U.S. Senate, Washington, D.C.

DEAR CHAIRMAN LEAHY: We request the following statement be included in the record of hearings of the Subcommittee on Agricultural Research and General Legislation regarding the U.S. Department of Agriculture's research activities in the area of rural development.

National Farmers Union wishes to express its concern about rural development policies, about the lack of services available in rural America and about the need for information and then for action to improve the quality of life for farmers and small town residents.

Delegates at our most recent national convention in March in Salt Lake City adopted a Policy Statement which reads in part:

"We urge a national policy that will stimulate revitalization of rural America to provide for new opportunities for sound resource development and a better population balance. We urge full funding of the Rural Development Act . . .

"We support efforts to redirect the priorities of land-grant colleges and universities and especially commend the study of the Senate Subcommittee on Migratory Labor aimed at exposing the cozy relationship between land-grant colleges and universities and agribusiness conglomerates, and (urge) directing research broadly toward solving the economic problems of farm and rural America.

"Colleges and universities should be encouraged to provide greater informative services for farm and ranch families."

I think you can see from these brief excerpts that our members feel they are not receiving the kind of service from their governmental or educational institutions that will help them solve the many *real* problems they and their communities have. Delegates acknowledged "the technological revolution in agriculture" which has been made possible by production research, but they believe it is now time "to redirect the priorities" of their institutions.

The Department of Agriculture devotes 90 percent or more of its research budget to agricultural production and has given very little attention to all of the other needs of the on-farm and small-town people in the country. Other agencies of government usually perform as if there were *no* rural America.

Perhaps, we can offer a small illustration. Our staff, in preparation for hearings on national health planning, made an effort to find out what percentage of rural people are covered by private health insurance. We called numerous government agencies here in Washington and not one had any statistics about the health insurance coverage of rural families.

Farmers have many problems in addition to growing the crops from which they make their living. They are dependent upon good transportation facilities and they are dependent on the services of small towns and small businesses. Their neighboring towns provide health, educational, cultural and social services, employment for their young people and all of their farm, household and personal needs. If these small towns do not prosper and there is a resulting loss in population and services, farmers must go farther and farther to satisfy their needs.

If the U.S. Department of Agriculture is to continue to be the governmental agency that represents rural Americans, it must begin to give help and leadership in all of these many areas of rural life. If it fails to change its emphasis from production to services, rural people will be forced to turn to other agencies as they have already done to some extent and their fears that they are ignored by their government will be confirmed.

Agricultural issues can no longer be considered separately or isolated from the decisions affecting small towns. Ways must be found to integrate the rural community and to improve the quality of life for both farm and non-farm people. Research should be directed toward that goal and be used as a basis for a continuing program of comprehensive, integrated rural development. All of the education and social agencies, not just the land grant colleges or USDA's own divisions, must be brought into this effort.

Somehow, we must dispell the metropolitan view that life in rural America is a bucolic idyl where farmers and small town people live close to the land and therefore, need few of the amenities that city dwellers expect. The needs of rural America are very real and they are systematically ignored because there is no united voice speaking loudly enough about those myriad needs and because there is no single agency giving strong leadership.

If the Department of Agriculture is to be the lead agency for rural America, it must broaden its outlook and Congress must give it the necessary funds to do the job.

Sincerely,

Reuben L. Johnson,
Director of Legislative Services.

Berkeley, Calif., *May 25, 1978.*

Mr. Patrick J. Leahy,
U.S. Senator,
Burlington, Vt.

Dear Senator Leahy: Your letter of May 17 with the enclosed *Hearings Outline* concerning "non-farm, non-food fiber, rural development research" is indeed interesting and raises important research and policy issues. Here are some comments that occur to me.

My knowledge of USDA and CRIS research: I was involved in USDA supported research as agricultural economics professor at Ames, Iowa, 1931–43, and as Department Head at Fargo, North Dakota 1947–54. Since then until 1970 I worked abroad (1954–65 at FAO-UN in Rome, and 1965–70 with the Agricultural Development Council, Inc., mostly in Sri Lanka). Upon return to the U.S., I settled in Berkeley, California, and retired from my Visiting Scholar position at the University of California in 1976, still engaged mainly with agricultural development abroad. It is only since then that I got involved again in agricultural research at home, as a consultant to Governor Brown's Committee on "Small Farm Viability in California Agriculture." I mention this only to explain why I am not up-to-date in my knowledge of the functioning of the USDA and Land Grant Colleges research system. Hence, my comments will refer only to *substantive* research issues rather than to organizational-administrative ones.

I. WHAT IS NONFARM, NONFOOD FIBER RURAL DEVELOPMENT AND RESEARCH?

It is research dealing with problems *not* reached by research in farm production and management, but with problems arising from the broader *socio-economic and rural community environment* within which the individual farm or town family lives. For instance, important problems in rural areas in the fields of (1) *home economics* (in basic terms applicable to farm and non-farm families), (2) *role of cooperatives* as links between the farm and non-farm sectors of the economy, (3) *rural town and community services* (e.g., schools, churches, vocational training, medical services, roads, communication, etc.), (4) constellation of *local and state tax* burdens and their incidence on farm and town families.

My feeling is that research in (1) home economics and (2) cooperatives has been made to serve farm families better (through the USDA and Land Grant College System) than non-farm rural families.

My feeling is that research in *home economics* and *marketing cooperatives* has served farm families better (through the USDA and Land Grant College System) than non-farm town families. On the other hand, development of town community services has naturally benefitted town people more than farm families. As to the comparative incidence of local and state tax burdens upon farm and town families—I have no basis for judgment. These are issues, however, which deserve serious study. What agencies are most competent to carry on such research?

II. THE RURAL SETTING

Rural development research must not be limited to "non-farm, non-food fiber research; it must deal with the rural countryside, as a whole, as an integral socioeconomic-political system, characterized by the geographic dispersion of the farm population and the spacial concentration of the town population. Recent advances in the technology of transport and communication, however, have reduced some of the disadvantages of the spacial dispersion of farm people.

At the same time, however, the severe decline of the resident farm population in some of the most productive farming areas, e.g., the Central Valley in California, due to the displacement of many farm families and resident farm workers by large corporations and heavy machinery, has damaged the vitality of many rural towns through loss of local population, employment opportunities and farm customers. This has been demonstrated by Dr. Goldschmidt's study of the Arvin and Dinuba towns in California's Central Valley.

Rural development research viewed in this perspective is urgently needed, but faces difficult organizational problems. The USDA-Land Grant College-Extension Service System is, on the whole, strong and effective, but serving mainly relatively large, highly commercialized farmers. As far as I know, very little attention is given to the small-scale or part-time farm families, or to the serious problems of part-time and migrant farm workers' families, or to the crucially important interrelations between farm and town people within the context of the integral socioeconomic setting of the rural countryside. It is this comprehensive and complex rural setting which requires most urgently an effective rural development research program. To this end, it will be necessary to co-opt the interest expertise and resources of local, as well as state governments. This need is particularly urgent in those highly productive farming areas where the large corporations are displacing farm families and resident farm workers, with serious harm inflicted upon rural towns and the displaced farm workers and their families.

Sincerely,

RAINER SCHICKELE.

TOWARD A SMALL FARM POLICY FOR THE UNITED STATES

(By James Chapman, Department of Agricultural Economics, Michigan State University, East Lansing, Mich., and Kevin Goss, Department of Agricultural Economics and Rural Sociology, Pennsylvania State University, University Park, Pa.)

INTRODUCTION[1]

Policymakers are currently being asked to attend to the "small farm situation" in U.S. agriculture. There exists a large number of small farms[2] occupying an appreciable portion of total farmland, and characterized by low farm sales and income. However, not all small farmers are poor. Some have adequate or more than adequate off-farm incomes, while others who are more dependent on farm income contribute to rural poverty. *For policy purposes it is vitally important to understand the diversity of small farms.*

The "small farm situation" is an integral part of the historical changes in the economic and social structure of U.S. agriculture (see Table 1). Since 1935 there have been large increases in average farm size and corresponding decreases in farm numbers. There has also been large decreases in the number of farm workers and in the total farm population. Agricultural production has doubled in this time. At the core of this change process is technological advance. Technological changes and their pursuant effects on cost and price structure have led to increases in the minimum size of an economically viable farm unit. Farmers who do not or cannot increase the size of their operations soon become noncompetitive and eventually drop out of the mainstream of farming; that is, become small farms.

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[1] This rather long introduction presents the current arguments for a policy supportive of small farms in the U.S. For further substantiation see two excellent policy statements—Belden and Forte (1976: ch. 6), Marshall and Thompson (1976).

[2] Census of Agriculture data indicate that the number and proportion of small farms (defined by economic class) has continuously declined to 1974. However, the Census has a record of continually underestimating farms, particularly small farms. An evaluation of the 1969 Census revealed that between 35 and 40 percent of all farms with gross sales less than $2500 were not counted. The Census figures presented in this paper are suspect. Equally important is the finding that the undercount has increased greatly since 1959, raising the possibility that small farms are numerically gaining in significance. For further details see Ingram and Prochaska (1972).

Aggregate and mean measures of productivity give a very favorable evaluation of these changes in U.S. agriculture. However, distributional data give a different picture. The structure of U.S. farms has changed from a large number of small farms, relatively equal in resources and output, to a concentration of production on a minority of the largest farms (Ball and Heady, 1972b). At the other end of these distribution curves are small farms who command a declining share of farm resources, production and income. *For policy purposes it is vitally important to recognize this interrelationship between larger farms and small farms with respect to agricultural change.*

The case for a small farm policy is based on equity and human resource considerations. It is apparent that small farms are becoming a stable form in U.S. agriculture, particularly through the increased availability of off-farm income (Cavazzani, 1977). The traditional argument has been facilitation of the exit of small farms because larger farms are more efficient (Schultz, 1953; Tweeten, 1970). However, the notion of efficiency has come into question. The new argument is a concern for the structured inequities that many small farmers now face, as a result of the change processes described earlier. Some may wish to remain in farming, but find themselves commercially nonviable for reasons beyond their control; for example, poor bargaining power in the market, excessive land taxes and/or inheritance taxes, restricted credit availability, biased tax laws, and large scale technology. Many small farmers wish to remain in agriculture for non-monetary reasons (e.g. "quality of life") but while making a reasonable living from the farm enterprise.

There are particular advantages to retaining these people in agriculture. The selective displacement of small farms and outmigration of farm people have brought social costs to urban areas, particularly with the declining employment situation (Stockdale, 1976). Small farms may serve as an "indirect welfare system," thus taking pressure off city welfare rolls and reducing the need for job retraining, rural industry incentives, and so forth. Small farm agriculture better supports local commerce and employment, thus making for more viable rural communities (Sonka and Heady, 1974). The quality of life in rural areas in general is bolstered (Goldschmidt, 1946). This human resource argument is the main basis for a positive small farm policy. *For policy purposes it is vitally important to attend to the small farm situation as part of a rural development program rather than agricultural commodity subsidies.*

A small farm policy should achieve a balance between well-being of small farmers and the public interest. Small farms occupy a significant proportion of total farm land, and it is in the public interest that this mode of farm production makes efficient use of that scarce resource (that is, increased food production). It has been recently suggested that the small family farm and small part-time farm serve as "shock absorbers" for society in times of economic adversity.[3] In times of low farm prices, the family farm is able to defer many costs after harvests and will accept low returns for capital and labor, in order to survive. This resilience of family farm agriculture to price fluctuations ensures reasonable stability in food supply (Barkley, 1976). The part-time farm family can also buffer against price fluctuations, and also employment fluctuations, by shifting the balance between farm and off-farm work and income (Cavazzani, 1977). Alternatively, there are potential social costs attached to concentrated, large-scale agriculture such as oligopolistic market power, high resource consumption, and environmental problems (Breimyer and Barr, 1972; Harris, 1974; Stockdale, 1976). *A small farm policy must reflect the mutual concern for welfare of small farmers and interests of the public.*

We have presented the case for a policy supportive of small farms in the U.S. However, to build an effective small farm policy one needs certain knowledge—knowledge that is apparently lacking at the moment. We will review in this article some of the current knowledge regarding small farms and the impact of conventional economic theory and government involvement. Finally, we will suggest an agenda for further research, which we contend is needed for formation of an effective policy for small farms.

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[3] Clearly, there is a contradiction here for small farm policy between public good and welfare of small farmers. To support small farms is to continue the current exploitative relationship between society and the farmers. The policy must include provisions for a subsidy to the family farmers from the general public for serving in this "shock absorber" role.

WHAT IS A SMALL FARM?

There is little concensus on the definition of the small farm, and for many reasons. Firstly, there is a great diversity of types of small farms that prevents a simple definition. Secondly, there is a high degree of overlap between small farms, family farms, and part-time farms which tends to confuse the popular conception of small farms. These problems will be dealt with in turn.

Definition of the small farm.—In defining the small farm, some of the dimensions of small farm and societal problems can be used to help formulate operational definitions. For example, obtaining sufficient income is generally considered to be a problem of small farm families. Then part of the definition of small farm could be made to include all those families whose incomes are insufficient to provide the family with goods and services determined as a desirable minimum. Note that this is only *one* dimension, and would not necessarily exclude people living on farms receiving a sufficient income. Other criteria could be exclusive, such as "a small farm may not have gross sales larger than X dollars." This reflects the societal desire to develop programs for small farmers which will not necessarily encourage them to grow in size.

Since income is a major dimension of small farm problems, the minimum income rule should be written in terms of goods and services rather than dollars due to regional price differentials.

A perhaps better conceptual definition of a small farm is: a farm which receives very low or negative returns to the farmer's capital and labor. If returns are negative, the capital stock will have to decrease over time until it is used up or until the small farmer decides to exit from farming. However, there are difficulties in operationalizing such a definition. Most commonly the small farm is defined in terms of gross farm sales, which does have some connection to the notions of size of operations and returns to capital and labor. Let Figure 1 be a hypothetical long-run unit-cost curve for farm production, at one point in time. The total cost per unit of production is reduced as more resources are employed to increase the firm's output. Hence, change in agriculture can be explained as a gravitational movement of farms down the unit-cost curve. Farm production units on the cost curve may fall into three general categories: (1) large scale units; (2) viable, moderate scale units; and (3) nonviable, small scale units (Sundquist, 1972:82–85). Large scale units in part III of the cost curve are receiving full returns on labor and equity capital. Moderate scale units in part II of the curve are viable because they take low returns on labor and capital. Small scale units in part I are not in themselves economically viable in the long run, as returns to equity capital are zero or negative. Small farms can then be conceptualized as those to the left of some point on the unit-cost curve, receiving very low or negative returns to labor and capital (Madden, 1976:2–5; Madden and Partenheimer, 1972:92–93). The returns to equity capital (after allowing for allocations to labor and management) for different size farms are shown in Table 2.

Some have nominated the cut-off point between small and viable farms at $10,000 gross sales (Madden, 1967:23, Sundquist, 1972:83), but more recent definitions use $20,000 gross sales (Thompson and Hepp, 1976:4, U.S. Senate, 1976b:1). Thompson and Hepp define the small farm as Census enumerated farms grossing up to $20,000 at 1969 agricultural price levels. The Senate report defines the small farmer as "any person who depends on farming as his primary source of income, whose gross annual sales from farming operations are less than $20,000, and whose income from nonfarm sources is less than $5000."[4]

Characteristics of small farms.—Small farms are a complexity of types, as will become evident from examination of Michigan data. This section will focus on the comprehensive study of Michigan small farms by Ronald Thompson and

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[4] One drawback of such definitions when expressed as current dollars is that they are not constant over time due to inflation. Rising agricultural prices will "push" farms near the upper limit of the small farm category into the next category, even though there have been no changes in the farm operation or no gain in real income.

Ralph Hepp, not because Michigan is representative of the U.S., but because their findings give some insight to diversity of small farms.[5]

Thompson and Hepp (1976:5) used the following classifications for small farms:

Rural residents—Person under 65 years of age, working more than 100 days/year in nonfarm employment, with annual farm sales less than $2500.

Supplemental income farmers—Person under 65 years of age, working more than 100 days/year in nonfarm employment, with annual farm sales between $2500 and $20,000.

Senior citizen farmers—Person receiving social security or over 64 years of age with annual farm sales of less than $20,000.

Full-time small farm operators—Person under 65 years of age, working less than 100 days/year in nonfarm employment, with annual farm sales of less than $20,000.

Data comparing these four small farm types with commercial farms are presented in Tables 3 to 6. Small farms accounted for 85 percent of all Michigan farms in 1969, with a relatively equal distribution across the four categories. Although "rural resident" farms accounted for the largest percentage of all farms by number, their share of total cropland and farm net worth were the lowest of all categories. One would expect these people to work mainly off-farm and farm either as a hobby or a supplemetary source of income. Accordingly, the average off-farm income per "rural resident" was highest of all small farm categories. Alternatively, "full-time small" farmers commanded the greatest proportion of cropland, and had the highest farm net worth. Net family income for these farm people was the lowest for all small farm categories, and it was predominantly farm income.

Full-time small farmers, supplemental income farmers, and senior citizen farmers are all assumed to have a primary interest in the farm. The difference between full-time and supplemental income categories is the amount of off-farm work. Senior citizen farmers are presumably retired farmers with nonfarm income from pensions and investments.

Poverty does seem to exist on some Michigan small farms, concentrated on full-time and senior citizen families, where the proportions reporting income from all sources below $5000, were one half and one third, respectively. Yet when asked why they were living in a rural area, the majority of all types of small farmers expressed the appreciation of rural life as a primary motive. With the rapid rise in the value of Michigan farm land, many small farmers are facing lower or increasingly negative returns on their assets. Yet 90 percent of farmers interviewed planned to continue in farming, at least in the short-run. Nearly one half anticipated no changes in their farming operations and another one third planned to expand production. From these and other responses to the 1974 survey, it is apparent that many small farmers remain in farming for non-monetary reasons.

The Michigan data of Thompson and Hepp (1976) clearly demonstrate the diversity of small farm types. Farming may be a primary or secondary occupation, and the small farm operator may be moving into farming, moving out, or planning on the current balance between farm income and off-farm income. Michigan is not typical of the U.S. The percentage of farms with gross sales less than $20,000 is higher than other states in all regions except the South (see Table 7). The ready access to industrial employment in Michigan offers opportunities for off-farm income that are not found in most states of the U.S. Despite any differences in small farm characteristics for other states and regions, the typology used in the Michigan study has general application.

Small farms as family farms.—There is a tendency in small farm policy discussion to confuse the terms "small farm" and "family farm." Conceptually, small farms are not necessarily equivalent to family farms, although there is an associtation between the two. The small farm, as discussed earlier, is conceptualized according to its scale of operation, although usually measured along a gross sales/returns to equity dimension. The family farm, on the other hand, is more a sociological concept, based on notions of land tenure and occupational structure. Although definitions vary, the central idea of a family farm is that the individual or family managing the farm on the daily basis also owns most of the land and other capital resources, and provides most of the physical labor (Rodefeld, 1974:39–109; 1975). That is, the occupational or farm tenure arrangement is not significantly dependent on hired laborers, hired managers, or absentee owners. However, because of the overlap between small farms and family farms, they should be treated together, but not on the assumption that all small farms are small family farms.

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[5] This Midwestern "bias" is partially offset by two studies detailing characteristics of small farms in the South; see Lewis (1976), and Marshall and Thompson (1976).

The data presented here was taken from the 1969 Census of Agriculture, the 1970 Census of Population, and a 1974 survey of a stratified random sample of small farm operations in lower Michigan. For further details see Thompson (1975), and Thompson and Hepp (1976).

The notion of family farm has an important bearing on small farm policy considerations. The family farm is held symbolic of U.S. traditional agrarianism and any threat to this farm organization is in conflict with some strongly held values and beliefs (Raup, 1972). Thus, the application of economic theory to small farm policy becomes clouded by political constraints, as discussed in the following sections of this paper.

Small farms as part-time farms.—As for family farms there is a high degree of overlap between small farms and part-time farms. The incidence of part-time farming has an important bearing on small farm policy considerations. Part-time farming, defined as farms where operators work 100 days or more off the farm, has increased steadily to 40 percent of all farms in 1969. The amount of off-farm income has risen dramatically in recent years, particularly for small farms (see Figure 2).

Ada Cavazzani had developed a "hypothesis that part-time farming in industrial societies is a substantially stable form of economic and social organization, based on a flexible structure, the farm family, and connected with expansion of the capitalistic system of production (1977).' Changes in the structure of agriculture have forced smaller farms to look for nonfarm employment. At the same time, decentralization of the industrial sector and expansion of the tertiary sector of the U.S. have allowed many farm people to remain on their farms while earning income from off-farm jobs. This option has also become available for nonfarmers who have migrated from metropolitan areas and invested in farmland.

In conclusion, it seems clearly evident that small farms are not merely a transient entity in the change process to fewer and larger farms. Small family farms and small part-time farms seem to be persisting beyond the time needed for adjustment out of agriculture. Hottel and Reinsel (1976:4–8) suggested several reasons for explaining the continuance of small farms with negative or low returns to equity capital:

1. Many smaller farms may have tolerated low returns as a temporary measure while planning to expand operations and improve earnings.
2. Off-farm income is relatively more important than farm income for maintaining a reasonable living, or there are tax advantages that offset deficiencies in farm earnings for high income earners.
3. Farmland and housing are merely consumption items for those in nonfarm activities.
4. The potential for capital gains in land may be relatively more important than returns to equity.
5. Non-monetary factors may be so important that some farmers are prepared to accept less for equity capital, labor, and management than could be earned if resources were allocated to a higher monetary income alternative.

Thus, there appear to be many reasons for persistence of small farms, which make them an entity that cannot be ignored. They represent a diversity of farm types that warrant separate considerations in policy formation. They are conceptually distinct but closely associated to family farms, which involves "preservation of the family farm" notions. They are also closely associated with part-time farming, which raises issues of rural development. An effective small farm policy must reflect the complexity of the small farm situation.

One of the overriding concerns in small farm policy has been equity. Small farms and farmers have suffered under the current institutional arrangements for agriculture. This is particularly true for application to the conventional notion of economic efficiency, and the involvement of government in farm programs, agricultural research, and agricultural extension. These are critically reviewed in the next two sections.

ECONOMIC EFFICIENCY AND THE SMALL FARM

The neoclassical theory commonly used to analyze the decisions faced by individuals and firms purports that utility maximization on the part of consumers and profit maximization on the part of producers serve as dominant guides in the allocation of resources to specific uses. One of the basic underlying assumptions of the theory is that consumers and entrepreneurs possess perfect knowledge. In addition, many important variables representing intrafirm relationships are held constant.

Since small farms do not operate in the world postulated by the theory, but rather exist in an environment characterized by continual change, imperfect knowledge and disequilibrium, the conclusions drawn from the theory do not reflect reality. The static nature of the theory does not allow one to view dynamics of change in a meaningful way.

Economies of size.—The "economies of size" arguments with respect to agricultural production have had great impact upon the changing structure of agriculture. These arguments state that farms must be large in order to be "efficient."

While the exact definition of efficiency is subject to much controversy and interpretation, in this context let efficiency imply the ability to maximize using the most advanced technological innovations.

The economies of size question has three major aspects which Marshall and Thompson mention in their 1976 publication.

1. Internal economies—as farming operations expand, the ability to utilize capital-intensive, labor-saving technologies increases, thereby increasing the productivity of farm labor and lowering unit costs.

2. External economies—large farms buy inputs and sell output in large quantities, often obtaining quantity purchase discounts and decreased per unit transportation and marketing costs. The availability of credit for farming operations is another important external economy, since large farms can obtain easier credit terms because of their greater command of resources which can be used as collateral.

3. Economies resulting from public policy—there exist economies of size due to the ability to capture a larger portion of the benefits resulting from government programs designed to control agricultural production and increase farm incomes.

There also exists external *diseconomies* of size which are often disregarded when determining the efficiency of operations. The distinction needs to be made between private returns and social returns. A good example of this is point pollution. A 1000 head beef feedlot can be very efficient in terms of utilization of capital and labor, but can also have harmful effects on the environment due to the heavy concentration of wastes in a small area, which are not counted as costs (but perhaps should be) to the beeflot operator.

It would seem that the possibility exists for small farmers to capture some of the economies of size and avoid some of the diseconomies with some appropriate institutional organization. For example, small farmers could purchase large machinery on a joint basis or contract for custom use of machinery owned by large farmers. Service cooperatives could be formed to obtain quantity discounts on input, purchase machinery, provide credit, and bargain with marketers and processors. With smaller sizes of operations, some types of pollution would be less likely to occur.

GOALS AND VALUES

The goals and values that affect small farm agriculture can be divided into two categories, societal and individual.

Societal goals.—The societal goals and values which affect small farmers have their roots in Jeffersonian ideals expressed during the early history of the United States. These ideals included freedom, independence, self-reliance, ability to resist oppressors, and the right to own land, which implied the right to employment and income (Gulley, 1974). Support for a small farm agriculture rested on two beliefs: (1) small farms were the seedbed of independence and democracy, and (2) small farms defined the relevant full employment policy of the day (Raup, 1972).

The structure and size of farms has changed drastically, and a justification for this change is often expressed in the emergence of a goal that seemingly "overrides" the previously mentioned goals put forth by the founding fathers: the "efficient" allocation of resources to agricultural production. The belief is held by many that in order for a farm to be efficient in terms of costs and returns, it must be large enough to be able to take advantage of the latest technological developments. Since technological developments have historically favored larger and larger units of production, the implication arose that a farm must be large in order to be efficient.

Is allocative efficiency so important that it should cause other societal goals to be disregarded? Whenever the prices of food increase, the immediate reaction is to consider the farmer the culprit and to push for the development of new technology to decrease production costs. In fact, the farmers' share of value added in most food products is small and in many instances decreasing as processing and marketing become more elaborate. In 1969, the farmers' share of consumer expenditures on food was less than six percent of disposable personal income. Measured as a percentage of Gross National Product, value added at the farm level is less than one percent. The facts suggest that other societal values should receive more relative weight than is currently being given. The other values include distributive equity, community structure, population distribution, and rural welfare (Raup, 1972).

Individual goals.—Neoclassical theory characterized producers as profit maximizers, while the "behavioral" theory of the farm looks at them as overall "utility" maximizers. The profit maximizing assumption appears not to hold for farmers, especially when one considers the wealth-income paradox prevalent on small farms. Largely due to increasing land values, small farmers many times find themselves having a large net worth and yet an extremely small return to capital and labor. In many cases, the farmer would be better off from an income standpoint if he sold his farm, placed his money in a bank, and simply drew the interest. This leads to the conclusion that small farmers are certainly not profit maximizers and hence not economically "rational." There are obviously other factors affecting the small farmers' choice to remain in production. Part of this may be that small farmers value things other than income sufficiently to keep them in farming. Just what the individual value relationships are needs to be explored. Any policy formulation should to the extent possible take into consideration the values and goals of the target population.

The uniqueness of small farms.—Small family farms are unique in that there is a strong interdependence exhibited between production-related farm decisions and family decisions. The physical and financial resources controlled by the farm business are subject to appropriation to meet the needs of the family. The small farm operator's goals are influenced by family conditions and desires. This influence will be reflected in resource allocation decisions concerning the farm business. Although the business and the farm family may be competitive or complementary at different times and in different situations, they cannot be independent because of uncertainty, limited capital considerations, and changing characteristics of the family over time, such as family size, stage of the life cycle, and family-related goals.

The small farmer's income must be allocated among debt repayment, current consumption by the farm family and re-investment in the farm enterprises to provide for future income and consumption. The extent to which trade-offs must be made between farm investment and family consumption is extremely important when considering alternatives for low income small farmers. Internal and external capital restrictions are important factors in determining the small farm's capacity to survive and prosper.

Resources of the small farm and of the farm family may be combined in a seemingly "inefficient" manner. However, the existing combination may yield greater "returns" to the small farm family because of the importance of some non-monetary values the family holds.

THE IMPACT OF GOVERNMENT ON SMALL FARMS

Public policy can be used as a tool to help alleviate or solve some of the problems facing small farmers and their families. However before making suggestions for government policy, we should be aware of the effects government programs and policies have had on the structure of agriculture and on small farmers.

Farm program.—Farm commodity programs originally had two objectives, and should be evaluated in terms of these objectives:

1. To redistribute income from nonfarmers to farmers
2. To attract more resources to agriculture than would otherwise be available through the market.

The farm commodity programs of the 1930's were devised mainly as a means of helping farmers who were generally poor with small holdings by today's standards improve their income position relative to other participants in the economy. Equity, then, was an important consideration. There was also concern that growth in farm productivity would be slow relative to the nonfarm sector if incomes were insufficient, with consequent impediment of the overall rate of economic development. The structure of U.S. agriculture has changed drastically since farm programs came into existence, as have the objectives of the program. The concern for income equality between the farm and nonfarm sectors still exists, but equity *within* agriculture in the distribution of farm program benefits has largely been ignored.

It has become evident that farm programs, be they price supports, acreage allotments etc. are designed in such a way that the benefit to be derived from them is directly related to the size of the farm operation, amounts of assets controlled, and the volume of output produced. By their very nature, they tend to provide benefits—paid for by both consumers and taxpayers—primarily to those larger farmers who produce the bulk of agricultural output. Conversely, the very large number of small farmers, who in aggregate produce only a modest fraction of total farm output, are helped relatively little by the programs (see Table 8). A good example was provided by Charles Schultze (1971):

"The very nature of current price support programs guarantees that benefits will be more heavily concentrated among large farmers than is total farm income. On small farms, net income is a high percentage of cash receipts. Much of the small farmer's input is his own labor, the return to which is treated not as an expense but as part of income. While large farmers' cash receipts are much higher, their expenses-for fertilizer, machinery and hired labor—are also much greater. Their own labor is a smaller fraction of total inputs and their net income a smaller fraction of cash receipts than are those of small farmers. Price supports raise prices and cash receipts above free market levels by about the same percentage for large and small farmers, but raise net income proportionately more for large farmers than for small ones. And the large farmers' share of total price support benefits will be proportionally larger than their share of net income."

On the whole, farm programs have accomplished their two main objectives, but not without providing incentives leading to a radical change in the size structure of farms in the last four decades. The implied goal of equity in the distribution of benefits has largely been ignored. Farm programs, then, have been another of the factors that has contributed to the increased concentration of agriculture and the resultant decrease in the number of small farms.

Agricultural research.—Agricultural research and development programs carried out by public and private institutions have made a large contribution to the evolution of the current food and fiber system structure. The main, overriding goal of agricultural research, at least at the farm level, has been to increase productivity while decreasing costs. Productivity has in fact, increased, but on an uneven scale. Larger farm units have made greater increases in productivity than have smaller ones, largely due to the indivisibilities and minimum scale requirements introduced by some of the new technologies that have been developed.

Technology can be separated into two different types: mechanical and biological. Mechanical technology is mainly labor-saving and does not usually increase yields. Biological technology, on the other hand, contributes to increased yields while at the same time maintaining or increasing levels of input usage.

The benefits of these two types of technologies usually accrue to different groups. The benefit of mechanical technology go to agri-business firms and large innovative entrepreneurs in the form of increased land values and profits from the invention of new machinery. The benefits of biological technology are usually distributed more equitably over the farm size spectrum, although there are exceptions to this. For example, a new tomato breed was developed to complement the invention of a mechanical harvester. In this instance, benefits accrued from both types of research to large tomato farmers. Another group was also deprived of benefits or compensation; the migrant tomato pickers (Bieri, et al. 972).

It is important to note that any type of technological innovation which increases productivity whether it has minimum scale requirements or not, will cause the returns to land to increase and will enable early adopters to outbid others in acquiring more land. In a dynamic sense, then, no new technologies are "neutral." We cannot suggest, however, that no research should take place just because inequities occur in the distribution of its benefits. On the other hand, we should strive to reduce some of the inequities.

Agricultural extension.—The initial objective for public investment in extension was to spread the benefits of agricultural research among farmers, in an effort to increase overall productivity. Extension practice has evolved into a "progressive farmer" strategy (Hightower, 1973:13-15, 118-135). Current extension theory asserts that the most efficient way to have farmers adopt new technologies and practices is to concentrate efforts on a smaller number of more innovative, wealthier, larger, better educated and more receptive farmers and expect the other farmers to follow as information and attitude change "trickles down" (Rogers and Shoemaker, 1971: Ch. 5). There is an implicit assumption that equalization of benefits from an innovation will occur between the innovative and laggard farmers, in the long run.

Recent overseas studies indicate that extension practices which follow the "progressive farmer" strategy contribute to an increasing concentration of benefits to the "progressive" group and that the "gap" to later adopting farmers increases rather than decreases, with time (Roling et.al., 1976). To the extent that the Cooperative Extension Service has facilitated changes in agriculture it has inadvertently been biased against smaller farmers. This was to be expected. Given a high ratio of farmers to extension agents, the agents must be selective in how they spend their time. Consequently, they concentrate on the more receptive farmers and "push" a new technology only to the point where further adoption will occur from its own "inertia."

Our argument here is that as change in agriculture has set apart a group of larger, commercial farmers, these same people have attracted firsthand extension input. Consequently, special program objectives are needed if extension is to play a role in small farm policy.

CURRENT POLITICAL ISSUES WITH RELEVANCE TO SMALL FARM POLICY

There has been little Federal policy implementation pertaining to small farms. However, in response to more general changes in agriculture, there has been a lot of recent activity in the Congress. We will review here some of the bills that have recently introduced, and which have relevance to small farms. This is not to say that all or many of them will be passed into legislation but knowledge of the issues and opposing interest groups is vital to effect small farm policy making.

Rural Development Act.—An existing law that is most relevant to small farms is the Rural Development Act of 1972. Its Title V—Rural Development and Small Farm Research and Education—stated one of its purposes (Sec. 502c) is "to expand research or innovative approaches to small farm management and technology and extend training and technical assistance to small farmers that they may fully utilize the best available knowledge on sound economic approaches to small farm operations" (U.S. Senate 1972b:36). The research and extension responsibilities were to be with the U.S. Department of Agriculture and the Land Grant Colleges, and it was hoped to retain people on small farms with a reasonable living. However, Sec. 502c of Title V was never funded.

Subsequently, the General Accounting Office (1975) concluded that the U.S.D.A. and Land Grant Colleges had made insufficient effort to assist small farms. It recommended that these institutions investigate the problems and prospects of small farmers and assess the potential for education and research uniquely designed to improve the economic position of small farm operators.

A proposed amendment to Sec. 502c was then introduced requiring the U.S.D.A. to undertake such a study, with the express purpose of establishing a small farm research and extension program (U.S. House, 1976c; U.S. Senate, 1976b). The U.S.D.A. has opposed the amendment, and its future is uncertain.

The proposed legislation is fairly "target specific"—farmers with gross sales less than $20,000 and nonfarm income less than $5000. The principal recipients of the benefits of the Act could be classified as "full-time small farm operators." No special consideration would be given to "supplemental income" or "rural resident" farmers, although many of the benefits of the program would most likely be available to these groups.

Changing the census of agriculture.—The Census of Agriculture has undergone close scrutiny in the past four years particularly via Congressional hearings. In mid-1973 two sets of hearings (U.S. House, 1973; U.S. Senate, 1973b) focused on the primary issue of whether the Census should be delayed to 1977 (as proposed by the Administration) or conducted in 1974 (as part of the historical sequence). Critics of the Administration's position (Agribusiness Accountability Project, Congressional Rural Caucus, National Farmers Union, National Rural Center, National Sharecroppers Fund, Rural America Inc., and Southern Regional Council) alluded to the ulterior motives of eliminating the demographic portion of the Census, and integrating the economic portion into the Economic Census.

More importantly, it was also claimed that an alteration to the definition of farm was being considered, to make the minimum gross sales criterion $2,500, $5,000, or $10,000. In later hearings (U.S. House, 1976a, 1976b) this re-definition was the primary topic, but with a proposed minimum criterion of $1,000 gross sales per year.[*] These same special interest groups were quick to point out that such a re-definition would eliminate 1.5 to 2 million people living on 571,000 small farms (1969 figures). In defense of the proposal, it was argued that enumeration of these smallest farms was very difficult, and the 1969 undercount has since been determined in excess of 30 percent (Ingram and Prochaska, 1972). A compromise re-definition based on $600 sales is rumored. Related hearings on use of sampling in the Census of Agriculture have raised other methodological problems, some relevant to studying small farms (U.S. House, 1976d).

Other legislation.—Concern for preservation of the family farm has resulted in several legislative proposals; of which some will affect the future of small farms. Of particular interest is current political and legal pressures on an existing excess land statute. The original Land Reclamation Act of 1902 provided that no irrigation water from Federally-built projects should be supplied to farms of more than 160 acres, and only then when there were bona fide farm families living on the land or in the vicinity. Despite amendments, this provision remains. These limits have not been enforced, particularly in the Central Valley of California, where huge holdings have occurred. The history of this issue appears in two Congressional hearings (U.S. Senate, 1972a, 1975). Recent press coverage indicates that enforcement is likely, which if successful, will help the cause of the U.S. small farmer.

Another proposal is to prohibit large-scale corporate farms through an amendment to the Clayton Anti-trust Act. This Family Farm (Antitrust) Act would ban those corporations with more than three million dollars in assets (U.S. House, 1972). This anti-corporate farm approach has a long history (U.S. Senate, 1968, 1973a) but legislation has only been enacted in some central states.

Other proposals include the Young Farmers Homestead Act (U.S. Senate, 1976a) which proposes a "government land bank" to purchase farm land and lease it back to young eligible (family) farmers with an option to purchase. There has also been the proposed Family Farm Inheritance Act and the proposed Family Farm Security Act, both designed to foster and continue family farms through Internal Revenue Code amendments and a loan guarantee program, respectively. Finally, the House Subcommittee of Family Farms and Rural Development is working on a comprehensive legislative "package" designed to assist the small farms.

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[*] The farm definition in existence since 1959 was a place with annual sales of $250 or more of agricultural products (no minimum acreage) or any place of 10 acres or more with sales of $50 or more.

Summary discussion.—Historically, U.S. farmers, as an aggregate, have behaved "rationally" in accord with economic theory. The number of farms that has disappeared from U.S. agriculture since 1935 has been several times the number of small farms remaining today. Over the long run, farmers have responded to differentials in income, and migrated to other jobs. In this context, the small farm problem can be viewed as merely a time lag in the "get big or get out" process. Recently, however, there has been indications of a stabilization of farm numbers generally, and small farms in particular. Consequently, the "small farm situation" cannot be ignored.

The need for intervention in the solution of problems facing small farmers and their families must be determined not by the number of small farmers there are, but rather by the type of problems small farmers face and the severity of consequences to society and to the affected individual if these problems are not solved. It has been established earlier in the paper that there are some very important reasons for maintaining a viable small farm agriculture, including food supply stability and the vitality of rural communities. Conversely, the negative social consequences of not having a reliable small farm agriculture to act as a "shock absorber" in times of adversity may also be great. There also would be high costs to small farmers exiting from agriculture and perhaps facing unemployment, as well as costs to taxpayers in terms of welfare and other transfer payments.

It is on these bases that a small farm policy has been called for which favors Federal intervention supportive of the long-term survival and prosperity of small farms (Belden and Forte, 1976: Ch. 6; Marshall and Thompson, 1976; Chapman and Goss, 1977).

Equity versus efficiency.—As discussed earlier, the consideration of the efficiency with which resources are allocated to agricultural production has been of prime importance when discussing the relative benefits of small versus large-scale farming. The argument for large farms traditionally has been that larger farms are more "efficient." On the other hand, people have argued in favor of small farms agriculture on distributive equity grounds. The question of equity versus efficiency needs to be explored.

Are there definite trade-offs that need to be made between efficiency and equity when trying to specify an optimal farm size policy? This question can be discussed from both a strictly market viewpoint and in the context of broader social concerns.

Arguments can be made in favor of small farms in terms of the realities of the market. According to recent studies by Earl Heady and Steven Sonka (1973a, 1973b, 1974), a small farm agriculture would compare favorably with a large-scale agriculture in that total farm income would be greater and rural areas would enjoy greater levels of income and employment, while total consumer food costs would increase only slightly. That food costs would not increase greatly may be of surprise to consumers, but this assertion is perfectly reasonable when one considers that farmers now command a relatively small portion of the consumer's food dollar.

When considering a small versus large scale agriculture, one must also pay attention to market structure. Should the U.S. food and fiber capacity be in the hands of a relatively few large holders? With no restrictions on the size of farms, agriculture could possibly lose its "competitiveness," with perhaps the owners of corporate farms forming a "cartel." The theory of the firm tells us that in the case where large amounts of market power are owned and exercised, production and prices will deviate from social optimums. This would seem to be an "indirect" argument for a dispersed small farm agriculture.

It seems that examining the small farm question only in terms of market alternatives is unduly restrictive. Small farms need to be given consideration also in a broader context of social desirability. In this context, efficiency is achieved to the extent that certain "goods" are being attained while at the same time "bads" are being avoided. The "goods" cannot be summed up in net income, especially not without regard to the way in which the income is distributed. Some of the other items we feel should be considered in judging the relative merits of alternative farm size schemes are: employment levels, rural and urban welfare, environmental quality, distributional equity, energy utilization, food availability, food quality, and concentration of wealth and power. For many of the preceding items, no normative common denominator is readily available, or the relative values given by the market are inappropriate.

In light of a broadened conceptualization of efficiency, the possibility arises that the assertion of greater efficiency on larger farms may not be valid. Both the market and social arguments with respect to farm sizes seem to support the notion that trade-offs between equity and efficiency may not have to be made in order to support a small-farm oriented agricultural policy. Small farms may well be more efficient as well as more equitable.

A research agenda.[7]—At the present time, there is a great void in our knowledge and understanding of the different types of small farms, farmers and their families. Especially lacking is information regarding the motivations, aspirations, and values of people living on small farms. As has been mentioned, there are a number of different types of small farms, and a first step in formulating policies appropriate for each type will involve the collection and analysis of sufficient amounts of information in order to be able to adequately define small farm problems which require resolutions. The following is a list of questions which need to be answered before program and policy decisions can be made to respond to the needs of small farmers.

1. What is a "small" farm? In order to be able to look at solutions designed to alleviate the problems of small farmers and their families, an operational definition of the word "small" needs to be presented. The answer to this question will have an impact upon the number of small farms identified; their social and economic characteristics; the types and magnitudes of their problems; the social consequences flowing from alleviation or non-alleviation of their problems; and the amounts of resources necessary to solve their problems.

2. What are the major "types" of small farms? Numerous adjectives are used to modify the word "farm" in reference to "small" farms. Some of these include part-time, low-income, limited resource, subsistence, retirement, rural resident, hobby, senior citizen, supplemental income, and full-time. The classification of small farms and farmers into different categories is an essential pre-condition to small farm research, as problems, magnitudes of problems, causes of problems, programs and policies aimed at alleviating problems and consequences of alleviating or not alleviating problems may differ among small farm types. Different programs may have to be designed for different types of small farms.

3. How many small farms are there, and what are their major characteristics? Significant work has been done by Thompson and Hepp (1976) in Michigan which provides some of the basic descriptive information needed. Some types of information about small farmers need to be presented in greater detail—what are small farm family goals, aspirations, needs and problems, causes of problems, implications of problems, and the fundamental ways that small farmers differ from large farmers.

4. What kind and magnitudes of problems do small farm families face? The "small farm problem" is a term used frequently in conversation and in literature. One may be led to believe that the small farm *is* the problem, and that the best way to alleviate it is to get rid of small farms via transfer of small farm families out of agriculture and into non-farm occupations or help them to increase the size of their operation. It can be hypothesized that due to severe capital limitations on many small farms, the second option is not usually a viable one.

Assuming that the small farm itself is not the problem, and there is good reason for doing so, then there is a need to investigate the problems that small farmers and their families face in order to ascertain the extent to which supportive programs are needed. Thus far, very little research has been carried out on small farm problems *as perceived by small farmers and their families.* It is quite possible that public perception of small farm problems does not coincide with the perceptions held by small farm families. Members of the target population should play a large part in helping to determine appropriate kinds of policies and programs which would work most effectively in achieving the ends desired.

5. What are the major causes of problems encountered by small farm families? If small farm problems are to be effectively dealt with, information must be made available as to which are the major causal factors behind the problems. Since any problem will contain multiple causal roots, attempts should be made to determine the most important causes and to allocate the greatest amount of resoures to attack them. If the deep-seated causes are not con-

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[7] This whole section is adapted from Rodefeld (1977).

fronted, or are confronted incorrectly, alleviation of small farm problems is unlikely to take place.

6. What will be the consequences to society and to small farm families of solving (not solving) small farm problems? What is needed here is determination of the benefits and costs of taking or not taking action to eliminate the causes of specific small farm problems. The Heady and Sonka studies have already been mentioned. This simulation work predicting long-run consequences of alternative farm-size scenarios stands alone. It also has been influential in current hearings relating to small farm policy. More of this work is needed.

7. What programs and/or policies can be designed and implemented to alleviate or solve small farm problems? The answer to this question will provide the basis for guiding future small farm research. However, it is difficult to attempt to answer this question until the previously stated questions have been answered. We need information on the institutions, behavior and performance of the small farm system, and to understand interactions, motivations, etc. before programs and policies can be devised and their validity and workability tested.

It is likely that resources will not be available to address the problems of all types of small farms simultaneously and with the same vigor. Decisions will have to be made on the allocation of scarce resources. Problems of the greatest magnitude and those with the most far-reaching consequences should receive the highest priority. Implications exist also with regard to the levels of resources that should be allocated to small farm research versus other types of research. Investigations in this area may demonstrate the magnitude of small farm problems to be much greater and have far greater negative consequences for society than is presently supposed.

Conclusions.—In this article we have not committed ourselves to specific suggestions on small farm policy. There are scholars more qualified than us to do so, and we have attempted to summarize their arguments. Rather, we have dwelt on some groundwork that has been done, is being done, or should be done, in order to build an effective farm policy supportive of the long-term viability of small farms. We need to understand the "small farm situation"—its diversity, its change, its causes—and the consequences of implementing or not implementing a small farm policy.

Finally, it is worth noting that the problems facing small farms are not limited to economics. In fact, we have done a little "soul-searching" with regard to the neoclassical notions of optimum size and efficiency. The small farm policy must be framed in the context of rural development programs and policy. Rural development should not be the prerogative of (agricultural) economics—it requires a multi-disciplinary effort.

TABLE 1.—CHANGES IN BASIC FARM PARAMETERS, UNITED STATES, 1850–1969

Date	Number of farms (million)	Average size of farm (acres)	Number of farmworkers (million)	Total farm population (million)	Farm output index (——=100) (1967=100)
1850	1.45	203			
1860	2.04	199			
1870	2.66	153			23
1880	4.00	134		21.97	37
1890	4.57	137		24.77	43
1900	5.74	147		29.88	56
1910	6.37	139	13.55	32.08	61
1920	6.45	149	13.43	31.97	70
1925	6.37	145	13.04		70
1930	6.30	157	12.50	30.53	72
1935	6.81	155	12.73	32.16	52
1940	6.10	175	10.98	30.55	60
1945	5.86	195	10.00	24.42	69
1950	5.39	216	9.93	23.05	73
1954	4.78	242	8.65	19.02	79
1959	3.71	303	7.34	16.59	88
1964	3.16	352	6.11	12.95	94
1969	2.73	390	4.60	10.31	103
Percent change: 1935–69	−60	+152	−64	−68	+98

Source: U.S. Bureau of the Census (1975: 457, 467–468, 498–499).

TABLE 2.—FARM NUMBERS AND AVERAGE RATE OF RETURN TO EQUITY CAPITAL BY FARM SALES, UNITED STATES, 1970

Gross farms sales	Number of farms and distribution		Rate of return to equity (percent)
	Thousands	Percent	
0 to $2,499	1,156	39	−6.1
$2,500 to $4,999	435	15	−6.5
$5,000 to $9,999	397	13	−.1
$10,000 to $19,999	390	13	2.9
$20,000 to $39,999	343	12	4.4
$40,000 to 99,999	178	6	5.9
$100,000 plus	55	2	6.9
All farms	2,954	100	2.1

Source: Hottel and Reinsel (1976:3).

TABLE 3.—NUMBER AND PERCENT OF MICHIGAN FARMS BY OPERATOR CHARACTERISTICS, 1969

Farm size and operator characteristics	Number of farms	Percent of total farms
Commercial: Full-time farmers	11,434	15
Small:		
Senior citizens	11,439	15
Full-time farmers	17,077	22
Supplemental income	15,341	20
Rural residents	22,637	29
Total	77,928	100

Source: 1969 Michigan Census of Agriculture.

TABLE 4.—*Percent of cropland use by operator characteristics, Michigan, 1969*

Farm size and operator characteristics:	*Percent of all cropland*
Commercial: Full-time farmers	35
Small:	
Senior citizens	10
Full-time farmers	22
Supplemental income	20
Rural residents	13
Total	100

Source: 1969 Michigan Census of Agriculture.

TABLE 5.—FARM ASSETS, DEBTS, AND NET WORTH FOR FAMILIES ON SMALL FARMS, 1974 SURVEY

	Rural resident	Supplemental income	Senior citizen	Full time	Total small farm
Land and farm buildings	$40,970	$61,020	$50,410	$63,660	$53,723
Machinery	3,760	10,390	5,000	14 810	8,488
Livestock	1,230	5,530	3,570	10,700	4,913
Total assets	45,960	77,440	58,980	89,170	67,124
Farm debt	7,280	6,380	950	5,410	5,352
Farm net worth	38,680	71,060	58,030	83,760	61,772
Consumer debt	1,890	1,000	310	590	939
	Percent distribution farm net worth				
$0 to $20,000	21	1	9	4	9
$20,001 to $40,000	39	21	22	19	26
$40,001 to $70,000	24	38	42	21	31
$70,001 to $100,000	16	19	22	17	18
$100,000 and over		21	4	38	15

Source: Thompson and Hepp (1976:16).

TABLE 6.—AVERAGE INCOME PER FARM FAMILY, 1974 SURVEY

	Rural resident	Supplemental income	Senior citizen	Full time	Total, small farm
Net cash farm	$50	$3, 080	$1, 930	$4, 750	$2, 299
Transfer payments	144	1	2, 933	249	594
Investments	394	155	1, 373	176	444
Other income pensions		12	771	216	181
Wages	10, 878	8, 861	1, 353	1, 166	6, 631
Net family income	11, 466	12, 109	8, 360	6, 557	10, 149
Per capita	2, 874	2, 667	3, 981	1, 946	2, 721
	Percent reporting income between				
$0 to $2,500	1	3	12	17	7
$2,501 to $5,000	4	3	19	30	11
$5,001 to $7,500	16	11	19	15	15
$7,501 to $10,000	17	15	16	19	17
$10,000 and over	61	68	35	19	50

Source: Thompson and Happ (1976:13).

TABLE 7.—PERCENT DISTRIBUTION OF SMALL FARMS BY REGION, UNITED STATES, 1969

Economic class Farm sales	Total $0 to $20,000	Class 3–5 $2,500 to $20,000	Class 6 $0 to $2,500	Part-time $0 to $2,500	Retirement $0 to $2,500
United States	79. 7	43. 3	7. 1	21. 0	8. 3
Regions:					
Northeast	71. 6	35. 5	4. 8	23. 0	8. 3
North Central	74. 5	49. 8	4. 0	15. 3	5. 4
South	87. 7	38. 0	11. 0	26. 8	11. 9
West	71. 7	42. 1	4. 5	19. 8	5. 3
Geographic divisions:					
New England	66. 9	32. 2	5. 7	21. 0	8. 0
Mid-Atlantic	72. 8	36. 3	4. 6	23. 5	8. 4
East North Central	77. 5	46. 7	4. 1	20. 3	6. 4
West North Central	72. 0	52. 3	3. 9	11. 2	4. 6
South Atlantic	85. 7	37. 9	10. 3	25. 5	12. 0
East South Central	92. 4	34. 3	14. 1	29. 8	14. 2
West South Central	85. 3	42. 0	8. 5	25. 1	9. 7
Mountain	70. 2	46. 3	4. 0	15. 8	4. 1
Pacific	72. 9	38. 5	4. 9	23. 1	6. 4

Source: U.S. Bureau of the Census (1973:56).

TABLE 8.—DISTRIBUTION OF FARM INCOME AND COMMODITY PROGRAM BENEFITS BY FARM SIZE, MIDSIXTIES

[Percent of total income or benefits]

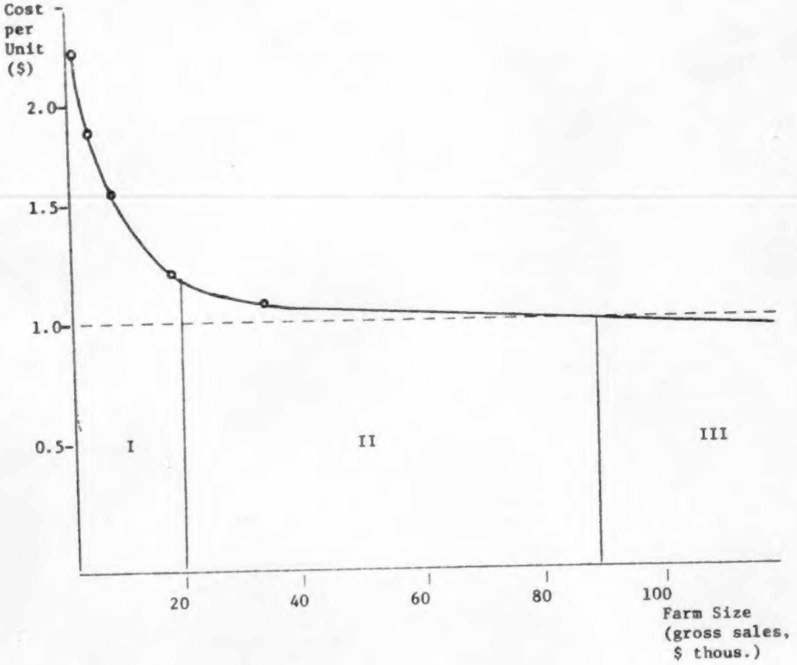
Source and year	Farm size: Lower 20	Lower 40	Lower 60	Top 40	Top 20	Top 5	Gini concentration ratio
Farmer and farm manager total money income, 1963	3.2	11.7	26.4	73.6	50.5	20.8	0.648
Program benefits:							
Sugarcane, 1965	1.0	2.9	6.3	93.7	83.1	63.2	.799
Cotton, 1964	1.8	6.6	15.1	84.9	69.2	41.2	.653
Rice, 1963	1.0	5.5	15.1	84.9	65.3	34.6	.632
Wheat, 1964:							
Price supports	3.4	8.3	20.7	79.3	62.3	30.5	.566
Direct payments	6.9	14.2	26.4	73.6	57.3	27.9	.480
Total	3.3	8.1	20.4	79.6	62.4	30.5	.569
Feed grains, 1964:							
Price supports	.5	3.2	15.3	84.7	57.3	24.4	.588
Direct payments	4.4	16.1	31.8	68.2	46.8	20.7	.405
Total	1.0	4.9	17.3	82.7	56.1	23.9	.565
Peanuts, 1964	3.8	10.9	23.7	76.3	57.2	28.5	.522
Tobacco, 1965	3.9	13.2	26.5	73.5	52.8	24.9	.476
Sugar beets, 1965	5.0	14.3	27.0	73.0	50.5	24.4	.456
Agricultural conservation program, 1964:							
All eligibles	7.9	15.8	34.7	65.3	39.2	NA	.343
Recipients	10.5	22.8	40.3	59.7	36.6	13.8	.271

[1] The more closely the Gini concentration ratio approaches 1, the more unequal is the distribution; 0 represents a completely equal distribution.

NA = Not available.

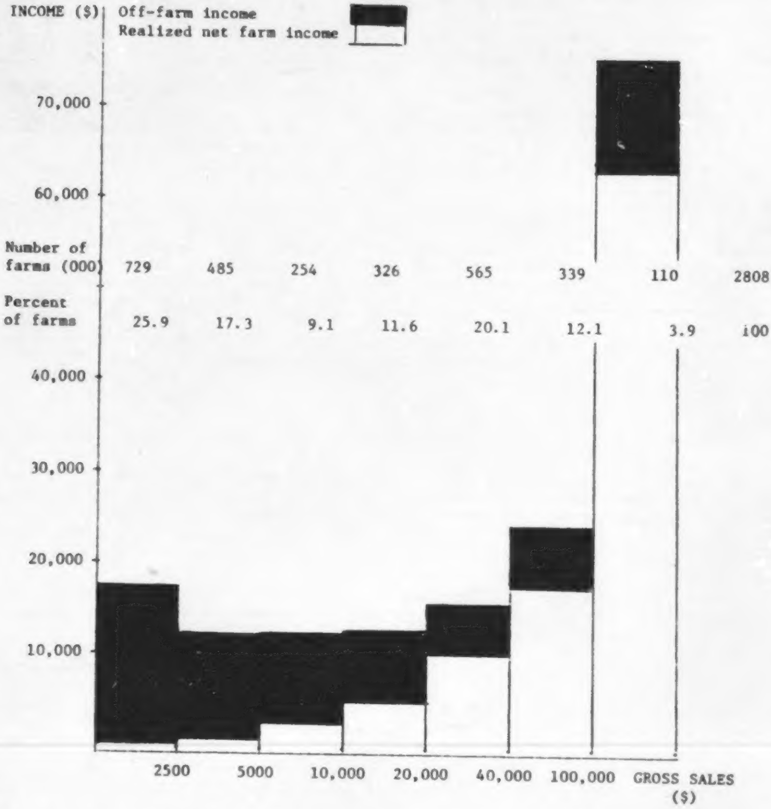
Source: Bonnen (1969:440).

FIGURE 1. Long-run Cost per Unit of Farm Production by Economic Class of Farms, United States, 1965.



Source: Ball and Heady (1972a:23).

FIGURE 2. Distribution of Income per Farm Operator Family and of Number and Percent of Farms by Value of Sales Classes, United States, 1975.



Source: U.S. Department of Agriculture (1976: 58–59).

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Central Savannah River Area Planning & Development Commission,
Augusta, Ga., May 31, 1978.

Hon. Patrick J. Leahy,
Chairman, Senate Subcommittee on Agricultural Research and General Legislation, U.S. Senate, Washington, D.C.

Dear Mr. Leahy: This is a response to your request of May 17, 1978 for a written statement regarding rural development research. There is a strong need for research which will further our understanding of the problems of rural areas and be helpful in designing effective programs and strategies to meet the very important developmental needs of rural areas. Unfortunately, not enough of the available research has been in this direction. Research should be considered which looks at successful rural developmental strategies both at a city and a regional level.

Many small rural cities, especially in the South, are experiencing substantial growth. Research needs to be conducted and disseminated on the impact of growth on rural areas and how small cities have handled the resulting problems. Of special concern in this regard, would be the provision of housing alternatives for those that cannot afford conventional housing.

At a regional level, I can think of no more successful development strategy than that of the Area Planning and Development Commission (APDC) of which the Central Savannah River Area Planning and Development Commission is one of 19 in Georgia. These commissions provide local government with highly trained professionals who assist area governments in planning, development and management at a fraction of the cost these services would cost otherwise. Research into the benefits local governments obtain by joining an APDC or an Economic Development District should be conducted to see how APDC's can be improved and expanded and also to study any multiplier effects federal grants might have in areas which have joined an APDC as opposed to those that have not.

I commend your effort at contacting rural development practitioners regarding the research required to support rural development and I sincerely hope that rural development practitioners be a part of any committee formed to review and prioritize research needs. This would assure that research conducted is relevant and, just as important, it would ensure that the research conducted is disseminated widely.

I thank you for contacting me on this matter and encourage you to contact me again if I can be of any more assistance .

Sincerely,

Tim F. Maund,
Executive Director.

Edinboro State College,
Edinboro, Pa., May 31, 1978.

Hon. Patrick J. Leahy,
U.S. Senator, Dirksen Office Building, Washington, D.C.

Dear Senator Leahy: Thank you for inviting my comments on rural development research within USDA and the Land-Grant System.

I have maintained for several years that the USDA, the Land-Grant Colleges/Universities System and the Extension Service were not addressing the needs of rural people in general. The USDA, as with most state departments of agriculture, is held to be the private sanctuary of those engaged in farming—and then, higher income farmers. This is borne out by the Comptroller General's Report of August 15, 1975, titled "Some Problems Impeding Economic Improvement of Small Farm Operations: What the Department of Agriculture Could Do," which from all indications found its way to the back of the proverbial bottom drawer.

Small farmers constitute much of the structure of rural areas—but millions of rural poor—and not so poor—need assistance. When Jim McHale was Secretary of Agriculture for Pennsylvania he put together a number of rural assistance programs—transportation, water, medical help to name but a few—that are now more badly needed than five years ago. So, the need is there—as it has been for decades.

But, please, Senator, let us not spend millions more for researching rural problems. Research materials lay floor to ceiling in offices like Rural America, Rural Advancement and others. What this nation needs now is some action. The research funds suggested would only go to the same institutions that get most of the Federal research funds anyway—the Land Grant College and University System—and they have not done anything of real value to correct matters. Take a hard look at rural education and try to find any real data of consequence. There is none! Many small colleges and institutions across this country could make important contributions to the problems affecting rural people—but they stand virtually no chance because of the unholy alliance of USDA-LGCU-Extension Service.

If you insist on doing more research then see that non-land grant colleges from rural areas have input. But, if you are sincere in your desire to do something I respectfully suggest that you call a working conference of selected people to meet in Pennsylvania (since it has the largest rural population of any state) to establish rural development priorities—and then get on with the tasks at hand. If your staff feels that more input is needed for properly designed policy I firmly believe such input is available for the asking.

I look forward to developments in the matters of rural problems and shall be happy to assist in whatever way is possible.

Sincerely,

LOUIS S. MEYER, *Director.*

RURAL AMERICAN WOMEN, INC.,
Washington, D.C., June 1, 1978.

Hon. PATRICK J. LEAHY,
U.S. Senate,
Washington, D.C.

DEAR PAT: Rural American Women, Inc. appreciates the opportunity to supplement information gathered by the Subcommittee on Agricultural Research and General Legislation at its hearings May 4–5. We are very much interested in research efforts within USDA and the Land-Grant College System and the attempts to make this research more valuable to rural communities, specifically to rural women.

Pat, as you are aware, the mandate of this organization is to voice the concerns of 34 million rural American women. Not only are we interested in rural development policy, we are vitally concerned. We trust that our views will receive the seriousness they deserve, indeed the seriousness they demand.

The attached statement lists pertinent resolutions passed after lengthy discussions by participants at the first *National Rural American Women Leadership Conference*, February 21–25, 1978. As you will see in the attachment, we are particularly concerned about research in the areas of *land reform, estate taxes, rural education including vocational education, employment opportunities for women, comprehensive health care programs, rural public transportation systems, a national plan for rational development of energy resources,* and *environmental preservation*. Admittedly, this is a heady agenda, but we believe that the number and diversity of the issues does not in any way detract from their importance.

We would draw the Committee's attention to two additional points which we believe merit consideration:

1. We would urge that a consistent definition of "rural" be adopted for use by the Bureau of the Census and other governmental and private agencies dealing with rural development.

2. In order to ascertain the needs of rural women, to evaluate research efforts and to put valuable findings to work, a sound data base must be established. Incredibly, such a data base currently is nonexistent.

After you and the committee members have had an opportunity to review these suggestions, we will work with you in any way we can.

Rural American Women, Inc. intends to make a substantial contribution to the creation of a sound rural development policy, not only for rural women but for all rural people.

Sincerely,

JANE R. THREATT, *President.*

Enclosure.

SUMMARY OF RESOLUTIONS, THE FIRST NATIONAL RURAL AMERICAN WOMEN LEADERSHIP CONFERENCE, FEBRUARY 21–25, 1978

AGRICULTURE

Urge the formation of legislation establishing equitable and fair laws assuring equal ownership and treatment under the law.

Support legislation to protect essential agricultural land from being used for non-agricultural purposes.

Urge increased funding for the USDA Cooperative Extension Service (Home Economics Section) so that greater emphasis can be given to women's needs in rural areas.

Support the Family Farm Act of 1978.

BATTERED WOMEN

Call upon the state and federal governments to pass and fund legislation setting up shelters for women in rural areas.

EDUCATION

Call upon all federal agencies and in particular the Department of Health, Education and Welfare to increase their support for rural women in the following areas:

Homebound literacy programs.

Seminars for teachers and counselors in sex-role stereotyping.

Vocational and community education.

Developmental and pre-school child care programs.

Increased funding for rural educational systems.

Family day care systems.

Support of networks in rural areas to increase awareness of educational, economic, vocational and health care options.

Increased funding for the arts in rural areas.

ENERGY

Support a national plan for the rational development of energy resources.

Greater research into the cumulative effects of exploration, extraction and conversion of fossil fuels and uranium.

HEALTH

Support legislation that would erase and eliminate the present inequities between urban and rural areas in state-operated Medicaid programs.

Urge reallocation of federal health care monies by Congress to rural communities proportionate to the population.

EMPLOYMENT

Support Congressional efforts to increase employment opportunities for rural women and request HEW to monitor public job programs to insure that rural areas receive their fair share of public funds.

MINORITY WOMEN

Urge a guaranteed income and jobs program to assure women who head families, a basic standard of living, especially rural minority women.

TRANSPORTATION

Call upon the appropriate public and private sources to increase their planning and funding of transportation systems in rural areas.

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